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Limaye, Dilip R.; Zhu, Xianli

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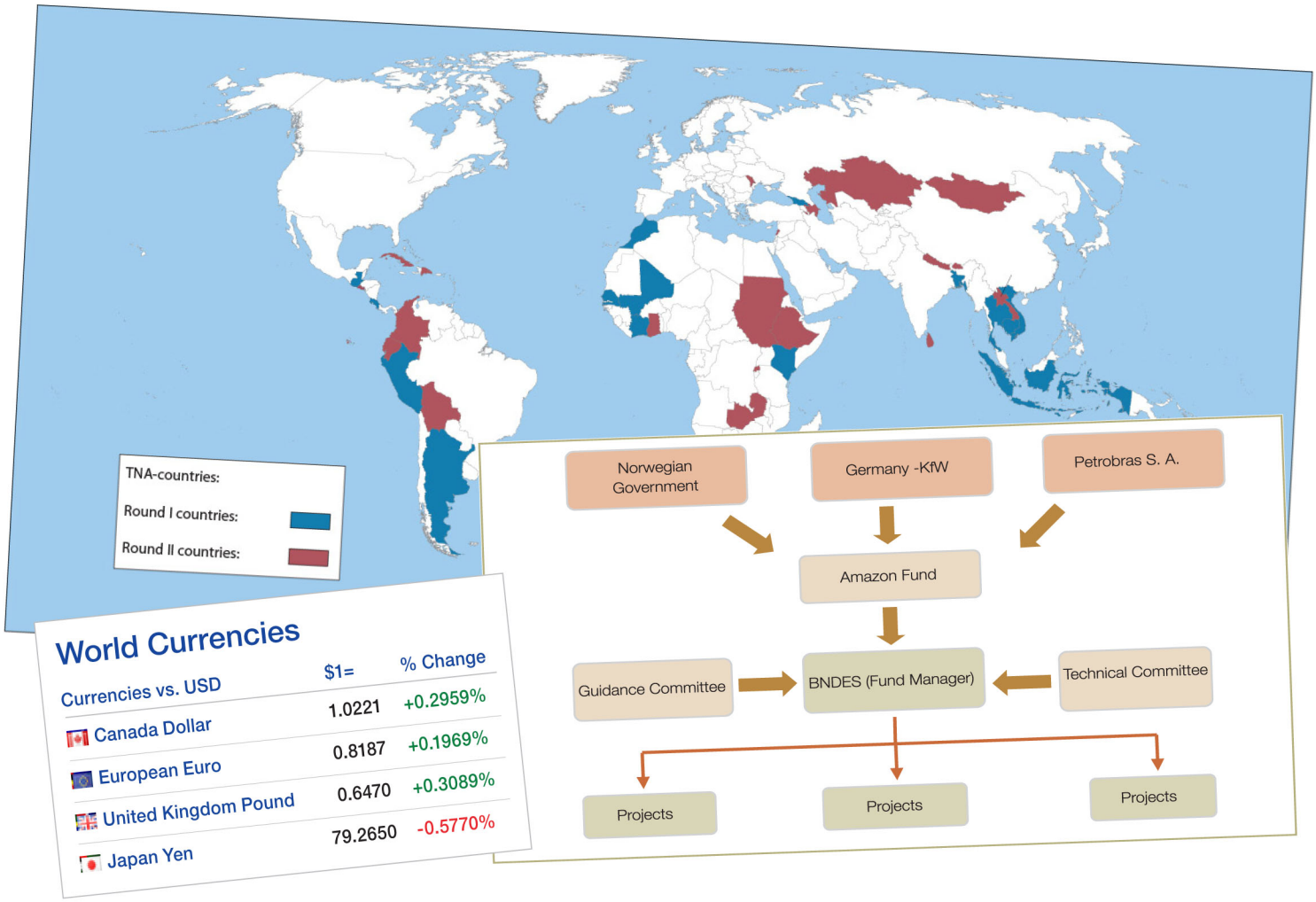
TNA Guidebook Series

Accessing International Financing for Climate Change Mitigation

– A Guidebook for Developing Countries –



UNEP RISØ CENTRE

ENERGY, CLIMATE AND SUSTAINABLE DEVELOPMENT

Accessing International Financing for Climate Change Mitigation

– A Guidebook for Developing Countries –

Authors

Dilip R. Limaye

Xianli Zhu

August 2012

UNEP

UNEP Risø Centre on Energy, Climate and Sustainable Development
Department of Management Engineering
Technical University of Denmark (DTU)
Building 142
DTU Risø Campus
Frederiksborgvej 399
P.O. Box: 49
4000 Roskilde
Denmark
Phone +45 4677 5129
Fax +45 4632 1999
http://www.uneprisoe.org/
http://tech-action.org/

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info@magnumbooks.org

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Disclaimer:

This Guidebook is intended to help developing country governments, planners, and stakeholders who are carrying out technology needs assessment and technology action plans for preparing good project ideas and accessing international funding for climate change mitigation. The findings, suggestions, and conclusions presented in this publication are entirely those of the authors and should not be attributed in any manner to the Global Environment Facility (GEF) which funded the production of this publication.

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Abbreviations and Acronyms

ADB	Asian Development Bank
AECF	Africa Enterprise Challenge Fund
AfD	Agence Francaise de Developpement
AfDB	African Development Bank
AGRA	Alliance for a Green Revolution in Africa
AusAID	Australian Aid Agency
BEEF	Bulgarian Energy Efficiency Fund
BFI	Bilateral financial institution
BNDES	Brazilian Development Bank
CDM	Clean Development Mechanism
CEEF	Commercialising Energy Efficiency Finance
CER	Certified Emission Reductions
CMI	Carbon Market Initiative
CO_2e	Carbon dioxide equivalent
CPF	Carbon Partnership Facility
CTF	Clean Technology Fund
DAC	Development Assistance Committee
DANIDA	Danish International Development Agency
DFI	Development Financial Institution
EBRD	European Bank for Reconstruction and Development
EE	Energy efficiency
EIB	European Investment Bank
ERPA	Emissions Reduction Purchase Agreement
ESMAP	Energy Sector Management Assistance Program
ESPC	Energy Saving Performance Contract
EUR	Euro (currency)
FAO	Food and Agriculture Organisation of the United Nations
FI	Financial Institution
FIP	Forest Investment Program
FIT	Feed-in Tariff

GEEREF	Global Energy Efficiency and Renewable Energy Fund
GEF	Global Environment Facility
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
IBRD	International Bank for Reconstruction and Development
ICCTF	Indonesia Climate Change Trust Fund
ICI	International Climate Initiative
IDA	International Development Association
IDB	Inter-American Development Bank
IEA	International Energy Agency
IFC	International Finance Corporation
IFI	International financial institution
IIGCC	Institutional Investors Group on Climate Change
IMF	International Monetary Fund
INCR	Investor Network on Climate Risk
IRR	Internal rate of return
JI	Joint Implementation
JICA	Japan International Cooperation Agency
KfW	German Bank for Reconstruction and Development (Kreditanstalt fuer Wiederaufbau)
LDCF	Least Developed Countries Fund
LFI	Local financial institution
MCCF	Multilateral Carbon Credit Fund
MDBs	Multilateral development banks
MDG	Millennium Development Goals
MFI	Multilateral financial institution
NCF	Nordic Climate Facility
NEFCO	Nordic Environment Finance Corporation
NGO	Non-governmental organisation
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OPEC	Organisation of Petroleum Exporting Countries
PAD	Project Appraisal Document
PCN	Project Concept Note
PDD	Project Design Document
PIN	Project Idea Note

PIF	Project Information Form
PoA	Programme of Activities
PPA	Power purchase agreements
PPCR	Pilot Program for Climate Resilience
PPP	Public-private partnership
PV	Photovoltaic
RE	Renewable energy
REACT	Renewable Energy and Adaptation to Climate Technologies
REDD	Reduced Emissions from Deforestation and Forest Degradation
REEEP	Renewable Energy and Energy Efficiency Partnership
SACEF	South Asia Clean Energy Fund
SCF	Strategic Climate Fund
SME	Small and medium enterprise
SREP	Scaling-Up Renewable Energy in Low Income Countries
TAP	Technology Action Plan
TNA	Technology Needs Assessment
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URC	UNEP Risø Center
USAID	United States Agency for International Development
VC	Venture capital
WBG	World Bank Group
ZAR	South African Rand

Preface

Enhancing the development and transfer of mitigation technologies is an essential part of the international response to climate change. Often new external funding is needed to fully implement nationally defined priorities. Navigating through the funding options to identify the most appropriate funding sources for a climate change mitigation project can be challenging, as funding options differ significantly in scope, sector and administrative procedures.

This guidebook is intended to address this challenge and assist developing countries in speeding up the transfer, deployment, and diffusion of mitigation technologies, enabling to contribute to climate change mitigation and reduce climate change impacts while pursuing national development goals.

Over 100 public and private funding sources are analyzed and their main features and application requirements and procedures presented. A general section provides guidance on how to prepare high quality project and programme proposals.

This guidebook is co-authored by Dilip R. Limaye and Xianli Zhu. Dilip is an international expert in renewable energy and energy efficiency financing who has authored several publications on mitigation financing for international organisations such as the World Bank and the International Energy Agency. He has also been a consultant for many United Nations agencies. Dr. Xianli Zhu is a senior economist at the UNEP Risø Centre on Energy, Climate and Sustainable Development (URC). She has been working with Technology Needs Assessments (TNAs) for several years and is well acquainted with the TNA processes and methodologies. She is also an expert on carbon finance.

Two international experts were kind enough to review the draft -Wytze van der Gaast from the JI Network and Bobes José Luis, partner of GreenMax Sustainability & Finance. Their valuable and constructive comments and suggestions have contributed significantly to the quality of this publication. John MacLean contributed to Chapter 5 and Appendix II. Ms Dolly Jain compiled information about the different funding sources and Ms Jessa Boanas-Dewes edited and improved the text. We thank all of them for their contributions. Special thanks go to colleagues at the URC for the many valuable discussions and suggestions they provided during the preparation of the guidebook.

This publication is part of a technical guidebook series produced by URC as part of the Technology Needs Assessment (TNA) Project (http://tech-action.org). UNEP and URC are implementing the TNA Project in 36 developing countries. Funding for the project is provided by the Global Environment Facility (GEF).

Jorge Rogat
Project Manager
UNEP Risø Centre

Mark Radka
Energy Programme Coordinator
UNEP DTIE

Executive Summary

This guidebook has been prepared by the UNEP Risø Centre (URC) as part of its Technology Needs Assessment (TNA) project. The TNA project assists developing countries to identify national mitigation and adaptation technology priorities and to develop Technology Action Plans (TAPs) for mitigation of greenhouse gas (GHG) emissions and climate change adaptation. The countries participating in the TNA project need to have sufficient knowledge of the broad spectrum of potential financing sources for climate change mitigation activities and the eligibility criteria and information requirements required by such sources. This guidebook has been prepared to provide information on financing sources that are likely to be relevant for providing needed resources to implement the TAPs.

This guidebook provides information to help TNA countries better identify and access financial resources for the mitigation activities included in their national TAPs. This guidebook covers both mitigation 'projects' (such as a wind farm or a solar PV generation facility) and 'programmes' (such as a credit line for financing energy efficiency projects in small and medium-sized enterprises (SMEs), or bulk procurement and distribution of compact fluorescent lamps to households). The primary emphasis is on multilateral and bilateral sources of financing but the guidebook also includes an overview of private funding sources and public-private partnerships (PPPs).

Given the very different financial needs and strategies associated with mitigation vis-à-vis adaptation, this guidebook exclusively discusses financing for mitigation actions in developing countries.[1] As the international negotiations on post-2012 are still going on and the financing arrangements for developing countries are still evolving, this guidebook focuses primarily on current financing options.

This guidebook only covers international financing for mitigation actions in developing countries. For example, EU funding for EU member countries and Chinese funding for mitigation in China are not covered in this guidebook. However, the EU funding for mitigation in developing countries and Chinese funding supporting mitigation in other developing countries are included. Special funds established in some developing countries by pooling financing support from developed countries are also covered in this guidebook.

The target audience for this guidebook is national experts, consultants, and government agencies within developing countries' TNA teams, including a broad range of stakeholders from government institutions, non-government organisations, and the private sector.

This guidebook was developed primarily by desk research using a range of information sources. Sources included databases on financing sources such as the World Bank/UNDP Climate Finance Options Database, the Overseas Development Institute's Climate Funds Update, and the World Bank's Report on Green Infrastructure Finance. In addition, a large number of reports on climate finance were reviewed to identify financing sources relevant to climate change mitigation.

1 It should be noted that many financing sources addressed in this report also have a strong developmental focus, and some mainly focus on development with a relatively small component on climate change mitigation. The distinction between climate change and development funding is not always clear. This guidebook includes sources that have at least some financing available for climate change mitigation.

Information on the financing sources was compiled in a standard format and reviewed and analysed to categorise the financing sources. For the multilateral and bilateral financing sources, the available information was used to define their major characteristics (such as geographic coverage, technology/sector focus, funding sources, financing objectives, financing mechanisms, and management and governance). In addition, the requirements of these financing sources for the preparation of the proposals were defined.

During the preparation of this guidebook, the authors also conducted a review of available information on private financing sources and public-private partnerships (PPPs) for financing mitigation programmes and projects.

The major sources of financing for climate change mitigation activities include multilateral, bilateral and private financing sources.

Multilateral financing sources include multilateral development banks (MDBs), such as the World Bank; agencies of the United Nations, such as UNDP and UNEP; and special international agencies created by these MDBs (such as the Global Environment Facility) in collaboration with various national governments. In this guidebook, these are referred to as multilateral financial institutions or MFIs. The MFIs have established a number of special funds for climate change mitigation, such as the Climate Investment Funds (CIFs) administered by the World Bank, which include the Clean Technology Fund (CTF) and the Strategic Climate Fund. In addition, the MFIs have established a number of Carbon Funds to facilitate the sale of the Certified Emission Reduction (CER) credits from mitigation programmes and projects.

Bilateral financing institutions (BFIs) are created and directed by a national government for the purpose of giving aid or investing in targeted development projects and programmes in developing countries and emerging markets. BFIs carry out the mandates given to them by the national governments, which are based on the strategic objectives of the governments and their focus on specific geographic areas and technologies. The BFIs covered in this guidebook are national agencies that provide financing for mitigation activities. Export credit agencies (ECAs), which act as intermediaries between national governments and exporters to issue export financing, are not included in this report.[2]

Private financing sources, which are increasingly involved in financing climate change mitigation actions, include a wide range of local and international banks and financial institutions, venture capital and private equity funds, pension funds and some special funds created to address climate change mitigation. Private financing sources also include carbon finance companies.

Many of the public (multilateral and bilateral) financing sources seek to leverage increased financing from private sources. To accomplish this, a number of public-private partnerships have been established. PPPs are designed to leverage private flows to fill funding gaps, transfer service delivery risks, and improve the cost effectiveness of service delivery.

The major findings of this guidebook are summarised below:

1. The number of financing sources (multilateral, bilateral and private) is very large. This guidebook has identified over 100 sources.

2 ECAs offer medium- and long-term credit insurance or guarantees, or act as direct lenders to exporters on behalf of governments. In doing so, their primary focus is not on climate change mitigation but on facilitating the export of capital goods and related services, in sectors such as infrastructure, transport, manufacturing, and energy production or distribution facilities.

2. These sources finance a wide range of mitigation programmes and projects in developing countries worldwide. The total amount of mitigation financing in 2009-2010 was about US$92.5 billion.

3. While all these sources are designed to finance climate change mitigation programmes and projects, there are differences in their specific objectives, target countries and regions, technology and sector focus, financing mechanisms used, and proposal requirements. Most financing sources address a wide range of mitigation technologies, the most common being renewable energy and energy efficiency. Some of the sources are more narrowly focused, such as on forestry.

4. One of the most important financing sources is the Global Environment Facility (GEF), established in 1991 as the financing arm of the United Nations Framework Convention on Climate Change. GEF works closely with ten partner MFIs and provides grant financing for a large number of mitigation activities in developing countries. GEF has also established a number of special funds for mitigation.

5. Many mitigation financing initiatives have been undertaken by the MDBs and UN agencies, who also act as implementing agencies for GEF. These MFIs have also created a number of special funds for financing climate change mitigation.

6. BFIs have been very active in mitigation financing. Some of the largest BFIs, such as JICA, KfW, and AfD have large programmes for mitigation financing and work in as many as 100 countries.

7. Private financing sources are playing an important role in mitigation financing. A large amount of private financing for mitigation activities is already being deployed as debt financing from local banks and financial institutions. Other forms of financing are becoming available, from venture capital and equity funds, pension funds, and special private funds targeted at mitigation finance.

8. Many carbon funds have been created by MFIs to help monetise the GHG emission reductions from mitigation programmes and projects. There are also a number of private carbon finance companies. However, the total amount of financing provided from carbon credits is small relative to the other financing sources.

9. The specific proposal requirements of the financing sources vary, but in general, they require certain basic information on the proposed project or programme. The general proposal requirements and the main elements of a proposal for mitigation financing are common and have been identified in this guidebook.

10. This guidebook will be useful for countries interested in developing a proposal for climate change mitigation financing. It will help identify the potential financing sources and get a general idea of their characteristics and requirements. It is recommended that additional source-specific information be identified to understand the specific proposal requirements and the evaluation process and criteria that will be used to make the funding decision. It will also be useful to look at prior proposals funded by the specific source to understand how to develop some of the needed information such as definition of the baseline and risk assessment and management.

1. Introduction

1.1 Project background

UNEP and the UNEP Risø Centre (URC) are implementing the Technology Needs Assessment (TNA) project as part of the Poznan Strategic Program on Technology Transfer supported by the Global Environment Facility (GEF). The project includes 36 developing countries in Africa, Latin America, Asia and a few members of the Commonwealth of Independent States (CIS).

The TNA project emphasises a stakeholder participatory approach. Inside each country, stakeholders, including relevant government agencies, businesses, NGOs, and research institutions, need to be involved during the whole process. This should include everything from selecting the most relevant technologies for climate change adaptation and mitigation in the national context, to identifying the barriers and enabling frameworks for selected technologies, as well as the preparation of technology action plans for speeding up the transfer and diffusion of the technologies, and project ideas for international funding.

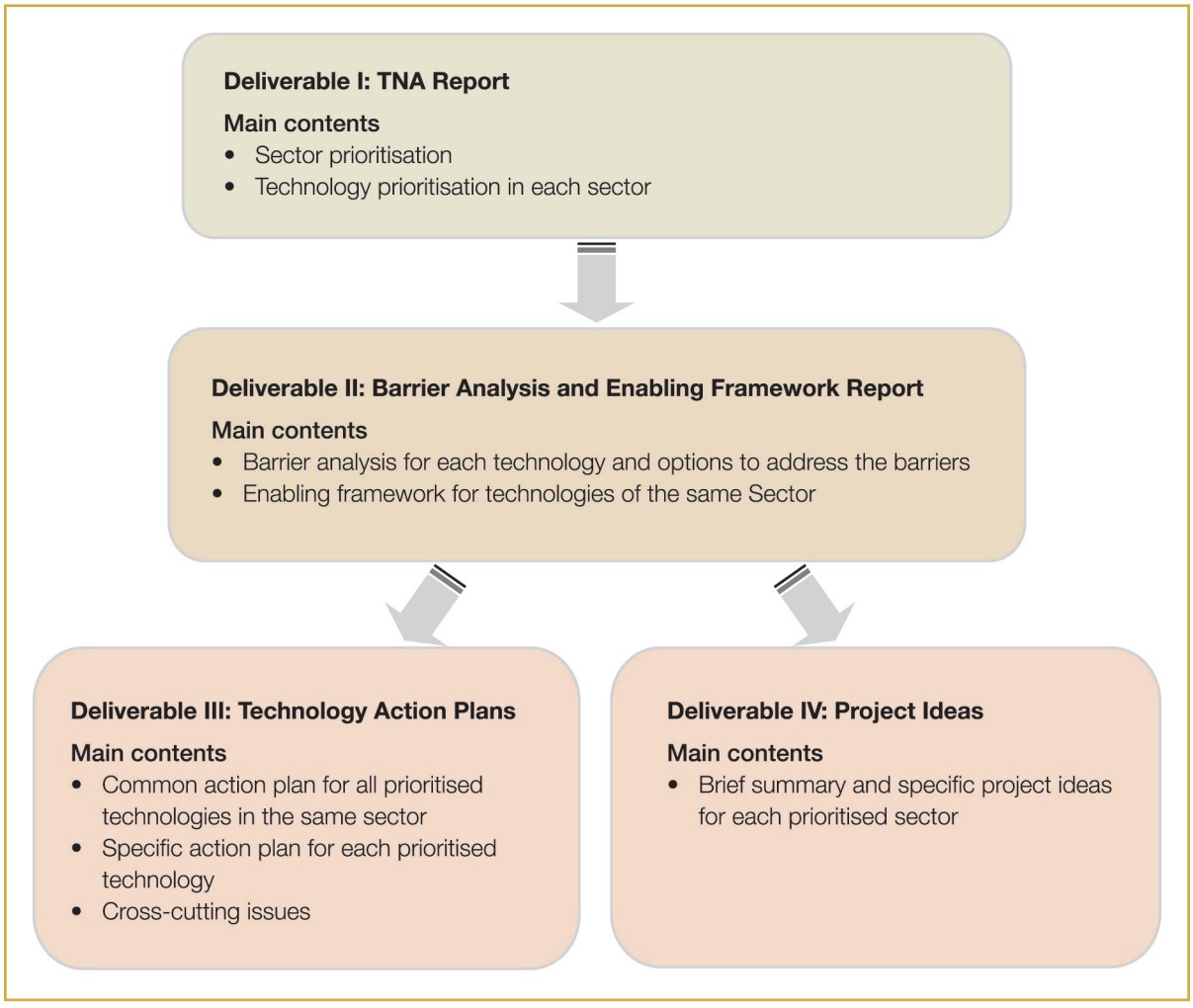
Meanwhile, the TNA work in countries is coordinated by the government and carried out by leading national experts from key sectors. These experts prepare the background material for stakeholder consultation and reflect the results of stakeholder consultation in the four deliverables (Figure 1.1 illustrates the TNA process):

1. A technology needs assessment (TNA) report on sector and technology prioritisation
2. A barrier analysis and enabling framework report
3. A technology action plan (TAP) report
4. At least one project idea for each prioritised technology.

The process receives international support in the form of methodologies, guidebooks, capacity building workshops, as well as help desk and report review support from regional centres and the URC teams.

The final outputs of the TNA project are technology action plans (TAPs) and project ideas. It is expected that through the activities under the project, countries can build consensus among different stakeholders on a portfolio of actions for achieving specified transfer and diffusion targets for prioritised adaptation and mitigation technologies. It is expected that through domestic actions, the policy and institutional barriers can be eliminated and supportive policy environment can be created for climate technology transfer and diffusion. Another purpose is to identify specific project ideas for international support, and make international support an integrated part of the portfolio of actions towards achieving specified technology targets.

Figure 1.1 Country reports under the TNA projects



Source: Prepared by the authors of this guidebook

In the last two decades, the global investment in climate change mitigation and adaptation has increased rapidly, including the international financial flows to developing countries. A number of multilateral financial sources and mechanisms have been established to channel funding for mitigation activities in developing countries. Many developed countries are funding mitigation activities through their development assistance agencies and institutions. The carbon market has also witnessed significant development. Under the international climate negotiations new funding sources and mechanisms are being debated and established to increase the funding for climate change mitigation and adaptation in the developing world. Many private funding sources are also increasing their loan and equity support.

Different financing sources can offer different types of funding, such as grants, concessional loans, commercial loans, as well as equity. Many of them also have different criteria for selecting the projects/programmes when providing funding support. The regional focus, sectoral focus, or activity type focus can also be different between financing sources. Moreover, for the same international financial source, these factors may also change over time. Therefore, it is necessary to provide the national TNA teams with an overview of the major sources of international funding for mitigation in developing countries. This will include the application procedures and eligibility requirements of the main sources of international funding,

as well as some guidance on how to prepare high quality project proposals to increase their chances of securing funding.

1.2 Objectives

The objective of this guidebook is to provide information to help TNA countries better identify and access financial resources to implement their national TAPs. The primary emphasis is on multilateral and bilateral sources of financing. However, this guidebook also includes an overview of private funding sources and public-private partnerships (PPPs).

The TNA project covers both adaptation and mitigation. The reports for adaptation and mitigation are separate, each consisting of the four components indicated in Figure 1.1.

Given the very different financial needs and strategies associated with mitigation vis-à-vis adaptation, this guidebook discusses financing for mitigation actions for developing countries only. The information about international financing sources for climate change adaptation actions in developing countries and their application are covered in a separate guidebook. As the international negotiations on post-2012 are still going on and the financing arrangements for developing countries are still evolving, this guidebook focuses primarily on current financing options. Brief explanations of potential future financing arrangements are included where appropriate.

Climate change is increasingly included in policy making agendas of many countries. In both developed and developing countries, many climate change mitigation actions are being planned and implemented. These actions can be funded by domestic funding or international funding. This guidebook limits its scope to the international financing sources for mitigation actions in developing countries. This guidebook does not cover domestic funding sources in developing or developed countries for their own mitigation actions. For example, EU funding for mitigation actions in its member countries is not covered, but EU funding to developing countries' mitigation actions falls within the scope of this guidebook. Some large developing countries like China, India, and Brazil not only fund some of their own mitigation actions, but are also beginning to give funding support to mitigation actions in other developing countries. Their funding for domestic actions is not included but their funding of other developing countries is considered international funding and is therefore within the scope of this guidebook.

The target audience for this guidebook is national experts/consultants within the country TNA teams that consist of a range of government officials and stakeholders from government institutions, non-government organisations, local banks and financial institutions, and the private sector. This guidebook is intended to be an essential source of information on financing sources for climate change mitigation actions/projects for these experts/consultants.

1.3 Information sources

This guidebook was developed using a wide range of information sources. These included databases on financing sources such as the World Bank/UNDP Climate Finance Options database,[3] the Overseas Development Institute's Climate Funds Update,[4] and the World Bank's Report on Green Infrastructure Finance (World Bank, 2011b). In addition, a large number of reports on climate finance were reviewed to

3 World bank/UNDP, http://www.climatefinanceoptions.org/cfo/index.php
4 Overseas Development Institute, http://www.climatefundsupdate.org

identify financing sources relevant to climate change mitigation. It should be noted that this guidebook presents the most recent information available at the time of writing (end of calendar year 2011).

1.4 The need for climate finance

The Intergovernmental Panel on Climate Change (IPCC, 2007) and the Stern Review (Stern, 2006) pointed out that investments in climate change mitigation are well below the likely costs incurred by taking no action to combat climate change. The United Nations Framework Convention on Climate Change (UNFCCC) has estimated that global additional investment and financial flows of US$ 200–210 billion annually will be necessary by 2030 to return global greenhouse gas (GHG) emissions to current levels (UNFCCC, 2007). This estimate includes mitigation and adaptation actions in both developed and developing countries.

At the United Nations Climate Change Conference in Copenhagen in 2009, government leaders from developed and developing nations expressed strong political will to urgently combat climate change in accordance with the principle of common but differentiated responsibilities and respective capabilities. It was emphasised that scaled-up, new and additional, predictable and adequate funding, as well as improved access to financing, was needed for the developing countries. In the context of meaningful mitigation actions and transparency on implementation, developed countries committed themselves to a goal of jointly mobilising an additional US$100 billion a year by 2020 to address the needs of developing countries (United Nations, 2010).

The Secretary General of the United Nations established the High-level Advisory Group on Climate Change Financing in February 2010. The Advisory Group concluded that it is challenging but feasible to meet this goal by accessing funding from a wide variety of sources: public and private, as well as bilateral and multilateral. This includes alternative sources of finance, the scaling up of existing sources and increased private flows (United Nations, 2011).

These and other studies have pointed out that a large part of the financing that is needed is for developing countries that do not have adequate internal resources. Therefore multilateral and bilateral financing is needed as well as mechanisms for leveraging private financing.

1.5 Current landscape of climate finance

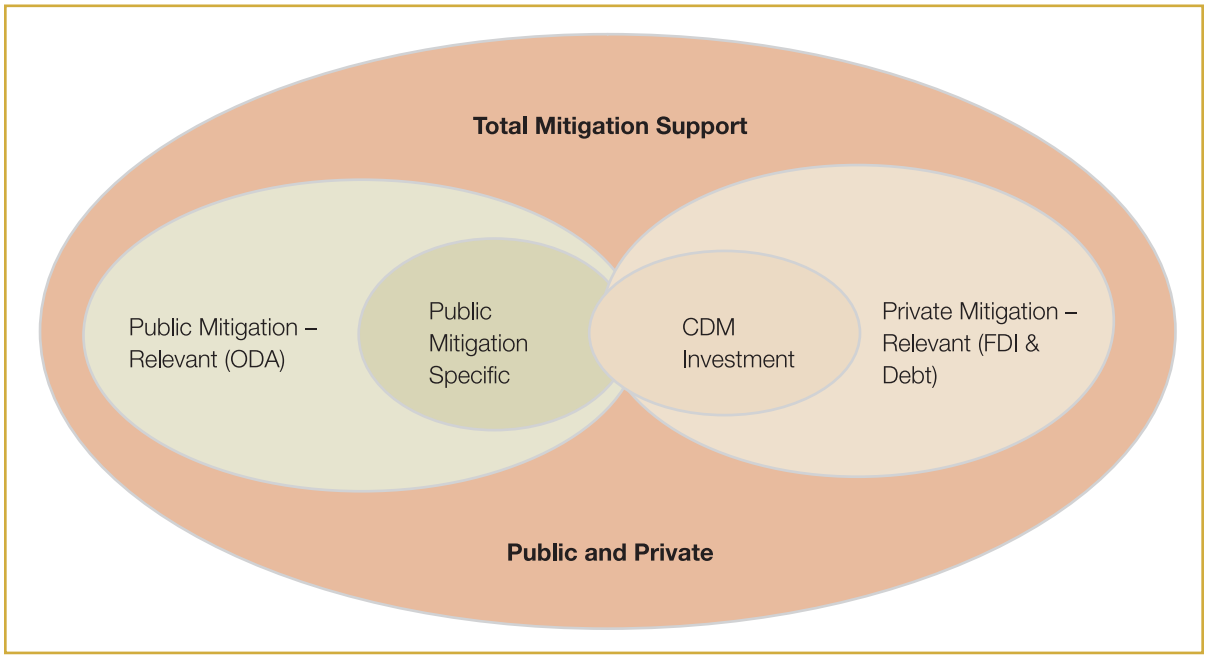
1.5.1 Overview

In recent international negotiations related to climate change mitigation the participants have agreed that there is a need to improve understanding, transparency and accountability about greenhouse gas mitigation actions and to improve the financial and technical support for mitigation. However, while there is general agreement among Parties that increased efforts need to be devoted to measurement, reporting and verification (MRV) of mitigation activities, the responsibilities for assembling and reporting information on mitigation financing and mitigation actions and results have not been clearly defined and data on mitigation support from developed to developing nations are not readily available (OECD/IEA, 2009).

The UNFCCC National Communications currently serve as the main reporting mechanism for tracking progress in mitigation support. However, this framework has a number of weaknesses that limit its value for assessing the level of mitigation financing for developing countries. These include incomplete and infrequent reporting, data gaps and inconsistencies, lack of sufficient detail, and lack of data on private

financing. The OECD/IEA report on MRV (OECD/IEA, 2009) suggested a framework for classification and reporting of mitigation finance as shown in Figure 1.2. However, reporting in this form is not yet available.

Figure 1.2 Illustration of mitigation finance support



Source: OECD/IEA,, 2009

The OECD Development Assistance Committee (DAC) maintains the Database on Aid Activities (the Creditor Reporting System or CRS)[5] which is sponsored jointly by the OECD and the World Bank. It covers the activities of most of the 23 members of the DAC as well as those of multilateral development banks and some UN agencies. The database reports aid provided by donors to developing country recipients for various sectors by year. The database reported a total of US$141 billion in overseas development assistance (ODA) in 2010, of which US$103 billion was from bilateral agencies and US$38 billion from multilateral agencies.[6] However, the breakdown of the ODA for mitigation activities is not readily available and private sources are not included in this database (OECD, 2012). It was estimated by OECD/IEA that about 24% of the ODA was related to mitigation activities (OECD/IEA, 2009).

Perhaps the best available information on international financing for climate change mitigation activities can be obtained from a recent study by the Climate Policy Initiative (CPI) which compiled detailed information on the finance flows from developed countries to the developing world for climate change mitigation and adaptation. This study (Climate Policy Initiative, 2011) assessed the current status of the climate finance landscape, mapping its magnitude and nature along the life cycle of finance flows, for example, the sources of finance, intermediaries involved in distribution, financial instruments, and final uses. The information was compiled from a wide range of sources, from international organisations like the OECD, to private sector sources like Bloomberg NEF, as well as NGOs like the Overseas Development Institute (ODI).

A summary of the information provided in this study is shown in Table 1.1.

5 http://www.oecd.org/dataoecd/20/29/31753872.htm
6 http://stats.oecd.org/Index.aspx?DatasetCode=ODA_DONOR

Table 1.1 International financing of mitigation activities, 2009-2010[7]

Financing source	Amount (Million US$)	% of total
Multilateral Financial Institutions	13,886	15.0%
Bilateral Financial Institutions	19,127	20.7%
Dedicated Climate Funds	2,428	2.6%
Carbon Offsets	2,250	2.4%
Philanthropy	240	0.3%
Private Financing Sources	54,600	59.0%
Total	**92,531**	**100.0%**

Source: Climate Policy initiative, 2011

The information provided above represents a 'snapshot' view of climate change financing. The level of detail provided in the Climate Policy Initiative study is not available for earlier years, so it is not easy to provide information on the trend in climate change financing. However, a review of other information sources focusing on total investments in certain mitigation technologies can provide some trend data. For example, according to The Pew Charitable Trusts (2011), in 2010 the clean energy sector grew worldwide by 30% above 2009 levels, and the growth over the 5-year period 2005 to 2010 was over 300%. While specific data for developing countries are not available, UNEP (2010a) reported that the growth in clean energy investments in South America, Middle East, Africa, Asia and Oceania increased very significantly from 2005 to 2009 (see Table 1.2).

Table 1.2 Growth in clean energy investments 2005-2009

Region	Investment			
	2005 (bn US$)	2009 (bn US$)	Growth (bn US$)	% Growth
South America	2.8	11.6	8.8	314%
Middle East & Africa	0.2	2.5	2.3	1150%
Asia & Oceania	7.9	40.8	32.9	416%
Total	**10.9**	**54.9**	**44**	**404%**

Source: UNEP, 2010a

Over the medium to long term, and with the appropriate public sector support, private investment in clean energy technologies is expected to almost double by 2012 and triple by 2020 compared to 2010 (UNEP, 2010a).

7 While the total amount of US$92.5 billion shown in Table 1.1 (or the US$97.0 billion including adaptation) compares favorably with the US$100 billion committed at the Copenhagen Summit, it should be noted that much of this amount represents funding already available prior to Copenhagen and that the Summit pointed out the need for additional US$100 billion.

1.5.2 Multilateral and bilateral financing sources

As seen in Table 1.1, a large proportion of the total financing is reported to be from private financing sources and represents mostly conventional debt financing of projects. This private financing mostly represents foreign direct investment (FDI). The majority of public international financing for mitigation actions in the developing world is provided through bilateral financial institutions or BFIs (20.7%), with multilateral financial institutions (MFIs) in second place (15%). These international financial institutions (IFIs) provide a wide range of funding for mitigation actions, generally through national government agencies or development banks of the receiving countries rather than direct financing to end users. The types of financing include grants, concessional loans, market rate loans, and loan guarantees, with a very small amount of equity financing (through specially created equity funds). Table 1.3 lists the major MFI and BFI sources.

Some of the IFIs have created dedicated climate funds that provide a small portion (2.6%) of the financing. Carbon finance, mostly through the Clean Development Mechanism (CDM) and voluntary carbon market, contributes only about 2.4% of the total.

In addition, the MFIs and BFIs have established a number of special funds that provide financing for mitigation activities. Examples include the Renewable Energy and Energy Efficiency Partnership (REEEP), Global Energy Efficiency and Renewable Energy Fund (GEEREF), the World Bank Carbon Finance Facility (Carbon Fund), Climate Technology Fund (CTF), Seed Capital Assistance Facility (SCAF), and the ADB Climate Change Fund (CCF).

Table 1.3 Multilateral and bilateral financing sources

Multilateral financing sources	Bilateral financing sources
Global Environment Facility (GEF)	German Bank for Reconstruction and Development (KfW, Kreditanstalt fur Wiederaufbau)
The World Bank	French Development Agency (AfD, Agence Francaise de Developpement)
European Bank for Reconstruction and Development (EBRD)	Japan International Cooperation Agency (JICA)
Asian Development Bank (ADB)	International Climate Initiative (Germany)
European Investment Bank (EIB)	Norwegian Agency for Development Cooperation (NORAD)
African Development Bank (AfDB)	Danish International Development Agency (DANIDA)
United Nations Development Programme (UNDP)	Swedish International Development Agency (SIDA)
United Nations Environment Programme (UNEP)	Canadian International Development Agency (CIDA)
Inter-American Development Bank (IDB)	Department of International Development (DfID)
International Finance Corporation (IFC)	Australian Aid Agency (AusAID)
Nordic Environment Development Fund	

Source: Compiled by the authors of this guidebook

Section 2 of this report discusses multilateral and bilateral financing sources including the special funds.

1.5.3 Private financing sources

The largest amount of financing is from private sources, such as private banks and financial institutions. Most of this is in the form of debt (corporate finance, project financing, mezzanine financing, or refinancing) for renewable energy projects with some being spent in project equity financing. When multinational companies invest in developing country projects, such as renewable energy, foreign banks often follow their customers and provide debt financing services. As they are familiar with the companies and their products from their home countries, they are willing to provide lending support to the climate change mitigation projects. Also, many of the financing programmes designed by the MFIs and BFIs focus on leveraging private debt and equity capital for mitigation project financing.

Private financing also includes venture capital funds, private equity funds, infrastructure funds, private carbon funds, and pension funds.

Section 3 of this report discusses the characteristics of private financing sources and presents some case studies of private financing for mitigation projects.

1.6 Types of financing

As indicated above, the different financing sources provide different types of financing. Table 1.4 provides an illustrative overview of the various types of financing and the organisations that typically provide such financing.

Table 1.4 Types of financing provided by different financing sources

Type of financing	Typically provided by
Grants	MFIs, BFIs, Climate Funds
Subsidies	MFIs, BFIs, Climate Funds
Concessional Loans	MFIs, BFIs, Climate Funds
Market Rate Loans	MFIs, BFIs, Climate, Banks/FIs
Loan or Credit Guarantees	MFIs, BFIs, Climate Funds
Carbon Credit Revenues	MFIs, Climate Funds, Private Carbon Funds
Corporate Loans	Banks/FIs
Project Debt Financing	Banks/FIs, Climate Funds, Venture Funds, Infrastructure Funds, Equity Funds
Mezzanine Financing	Banks/FIs, Venture Funds, Pension Funds
Re-Financing	Banks/FIs, Venture Funds, Equity Funds, Pension Funds
Project Equity Financing	Banks/FIs, Climate Funds, Venture Funds, Equity Funds
Corporate Equity	Venture Funds, Equity Funds, MFIs (e.g. IFC)

Source: Compiled by the authors of this guidebook

1.7 Detailed information on financing sources

Appendix I of this guidebook contains detailed information on multilateral, bilateral and private financing sources. The information is organised in a standard format and provides the following (where available):

Information about the financing source	Application requirements and procedures
• Name of Financing Source • Sponsoring Organisation • Address • Key Contact • Objectives • Region/Country Focus • Sector Focus • Technology Focus • Management/Governance • Size of Funding Source • Sources for Further Information	• Proposal/Application Requirements • Eligibility Criteria • Proposal evaluation Criteria • When and How to Apply • Procedures for Fund Disbursement • Type of Funding Support • Funding Limit for Individual Projects • Monitoring/Evaluation Procedures

1.8 Programmes and projects

Mitigation actions proposed in TNAs may consist of:

1. Projects, such as building a wind farm or a solar PV generation facility that feeds power into the utility grid)
2. Programmes, such as a credit line for financing energy efficiency projects in SMEs, or a bulk procurement and distribution programme for compact fluorescent lamps or CFLs).

Such programmes may represent aggregates of many small projects. This guidebook covers financing sources for both projects and programmes. Some financing sources may be more appropriate for projects (for example, private equity or mezzanine financing) while others may be more appropriate for programmes (such as a partial credit guarantee fund for small energy efficiency and renewable energy projects).

2. Multilateral and Bilateral Financing Sources

2.1 Multilateral financing sources

2.1.1 Introduction

Multilateral financing sources include multilateral development banks (MDBs), special international agencies created by these MDBs (such as the Global Environment Facility) in collaboration with various national governments, and multilateral funds. Together, these are referred to in this guidebook as multilateral financial institutions or MFIs. The MFIs have multiple governing members, including those from borrowing developing countries and developed donor countries. MFIs raise funds from a variety of sources, including capitalisation from governments and borrowing programmes, as well as income from loans. MFIs provide financial support and technical assistance for economic and social development activities in developing countries.

This section provides an overview of international agencies, followed by MDBs and the special funds.

The two major international agencies providing financing for climate change mitigation actions are the United Nations (UN) and the Global Environment Facility (GEF),[8] which was created as the financing arm of the United Nations Framework Convention for Climate Change (UNFCCC)[9]. Various agencies of the UN are active in mitigation financing. These include the United Nations Development Programme (UNDP),[10] the United Nations Environment Programme (UNEP),[11] the United Nations Foundation (UNF), [12] and the Food and Agriculture Organization of the United Nations (FAO).[13] These agencies have created a number of special funds which are discussed in the section on Special Climate Funds below. One example of the UN initiative in support of climate change mitigation actions in developing countries is the UN-REDD Programme (Reduced Emissions from Deforestation and Forest Degradation) jointly implemented by the UNDP, UNEP, and the FAO.

2.1.2 The Global Environment Facility (GEF)

GEF was established in 1991 and has the longest track record of financing climate change mitigation and adaptation programmes and projects. The GEF partnership includes ten agencies:

1. UNDP
2. UNEP

8 Global Environment Facility, www.thegef.org
9 UNFCCC, http://unfccc.int/
10 United Nations Development Programme, www.undp.org
11 United Nations Environment Programme, www.unep.org
12 United Nations Foundation, www.unf.org
13 Food and Agricultural Organisation of the United Nations, www.fao.org

3. The World Bank
4. Food and Agriculture Organization of the United Nations (FAO)
5. United Nations Industrial Development Organisation (UNIDO)
6. African Development Bank (AfDB)
7. Asian Development Bank (ADB)
8. European Bank for Reconstruction and Development (EBRD)
9. Inter-American Development Bank (IADB)
10. International Fund for Agricultural Development (IFAD).

In the current cycle, the GEF has the following major focal areas (GEF, 2011):

1. Climate change (mitigation and adaptation)
2. Biodiversity
3. Chemicals
4. International waters
5. Land degradation
6. Sustainable forest management
7. Ozone layer depletion.

The funding for GEF in its Fourth Cycle (2006-2010), provided by 32 countries, was more than US$3 billion, of which US$1 billion was dedicated to climate change. The current GEF funding cycle (Fifth Replenishment, 2010-2014, also known as GEF-5) has an overall pledged amount (from 34 countries) of US$3.54 billion. Of this amount, the Climate Change Focal Area has a pledged US$1.14 billion (about 33% of the total amount pledged) and an emission reduction target of 500 million tons of CO_2e.[14]

The GEF also works on several cross-cutting issues and programmes, including results and learning, Earth Fund, public-private partnerships, capacity development, Small Grants Programme, and Country Support Programme. The GEF generally works in collaboration with an implementation agency (such as the World Bank, UNDP, UNEP or EBRD) and offers grants to developing countries for climate-related programmes and projects. The project[15] eligibility criteria used by the GEF for financing are shown in Box 2.1

14 Global Environment Facility, www.thegef.org.

15 Note that GEF uses the word 'project' to refer to both 'programmes' and 'projects' as defined herein.

Box 2.1 GEF project eligibility criteria

1. Undertaken in an eligible country consistent with national priorities and programmes.
2. Addresses one or more of the GEF Focal Areas, improving the global environment, or advances the prospect of reducing risks to it.
3. Consistent with the GEF operational strategy.
4. Seeks GEF financing only for the agreed-on incremental costs on measures to achieve global environmental benefits.
5. Involves the public in project design and implementation.
6. Is endorsed by the government(s) of the country/ies in which it will be implemented.

Source: GEF, 2011.

A key feature of GEF climate change financing is that specific amounts are allocated to the various developing countries. Each country then develops and submits proposals to GEF within the appropriate focal areas.

The GEF projects are developed by host countries in cooperation with one or more of the 10 GEF agencies. An application needs to be made by submitting a Project Identification Form (PIF) to the GEF secretariat through a GEF agency with an endorsement letter of the Operational Focal Point of the host country.

Additional information on GEF financing is provided in Section 5 and Appendix II.

2.1.3 Multilateral financial institutions – Overview

The term Multilateral Financial Institutions (MFIs) refers to Multilateral Development Banks (MDBs) and other banks and funds (including sub-regional development banks) that provide financing to developing countries. MDBs include the World Bank Group (which consists of the International Bank for Reconstruction and Development, International Development Association, International Finance Corporation, and Multilateral Investment Guarantee Agency), and four major regional development banks:

1. The African Development Bank
2. The Asian Development Bank
3. The European Bank for Reconstruction and Development
4. The Inter-American Development Bank Group.

2.1.4 The World Bank

The World Bank is by far the most important among the MFIs. The core mission of the World Bank is to support economic development and reduce poverty while recognising the added costs and risks of climate change and the evolving global climate policy. The World Bank comprises 187 member countries, who are represented by a Board of Governors that act as the ultimate policymakers. Generally, the governors are member countries' Ministers of Finance or Ministers of Development. The Board of Governors of the World

Bank has made a commitment to making an effective response to climate change that encompasses both mitigation and adaptation. Consistent with this commitment the World Bank has developed a strategy to help developing countries undertake nationally appropriate mitigation actions in the context of sustainable development without compromising economic growth, by facilitating and managing finance and technology transfer from developed countries.

The World Bank provides low-interest loans, interest-free credits, and grants to developing countries. These support a wide array of investments in such areas as education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management. Some of the programmes and projects are co-financed with governments, other multilateral institutions, commercial banks, export credit agencies, and private sector investors. In the last several years the World Bank has substantially increased its lending for climate change mitigation activities. The Bank acts as an implementing agent for a number of GEF projects wherein it combines GEF grants with sovereign loans to scale up funding support for climate change mitigation activities.

In 2008, under the UNFCCC's Bali Action Plan (UNFCCC, 2008), the World Bank agreed to the creation of the Climate Investment Funds (CIF), a pair of international investment instruments designed to provide scaled-up funding to help developing countries in their efforts to mitigate rises in greenhouse gas (GHG) emissions and to adapt to climate change. These funds are discussed further below.

The World Bank has also been very active in carbon finance. A number of carbon funds were established by the Bank and the new Carbon Partnership Facility (CPF) has now been created. These carbon funds and the CPF are further discussed later in this report.

Other mitigation financing facilities managed by the World Bank include the management of a number of special climate funds and the issuance of 'green bonds' to support climate change mitigation activities.

2.1.5 Other multilateral development banks

These include the four major regional development banks, described briefly below.

African Development Bank

The African Development Bank (AfDB) was established in 1964 to help reduce poverty, improve living conditions for people living in Africa, mobilise resources for the continent's economic and social development and provide policy advice and technical assistance to support development efforts. With these objectives in mind, the Bank aims to assist African countries (individually and collectively) in their efforts to achieve sustainable economic development and social progress. Its shareholders include 53 African country members and 24 non-African country members.

AfDB has recognised that, while combating poverty is at the heart of the continent's efforts to attain sustainable economic growth, tackling climate change issues in Africa is critical to achieving the Bank's mandate. To this end, the Bank addresses climate change as a crosscutting corporate issue and has adopted an integrated results oriented Climate Change Action Plan that permeates all its operations to address mitigation, adaptation and financing. Some of AfDB's activities related to climate change mitigation include the African Carbon Support Program, the Climate for Development in Africa initiative, the Congo Basin Forest Fund, and helping to establish the Climate Investment Funds.

Asian Development Bank

The Asian Development Bank (ADB) was established in 1966, as a major source of development financing for the Asia and Pacific regions. ADB, in partnership with member governments, independent specialists and other financial institutions, focuses on delivering projects that create economic and development impact. Its main mechanisms for assistance are loans, grants, policy dialogue, technical assistance, and equity investments.

ADB is responding to the need for climate change mitigation through development of innovative policies, institutions, and investments to lead the region to a low-carbon and climate-resilient future. ADB plays an important role in leading the region to a green growth path through financing and innovative technologies. During the period from 2008 to 2010, ADB invested in more than 110 projects in over 40 countries related to climate change interventions.

ADB's strategic priorities related to climate change include:

i. Expanding the use of clean energy

ii. Encouraging sustainable transport and urban development

iii. Managing land use and forests for carbon sequestration

iv. Promoting climate-resilient development

v. Strengthening policies, governance and capacities.

The European Bank for Reconstruction and Development

The European Bank for Reconstruction and Development (EBRD) was established in 1991. It is the largest financial investor in the region that stretches from Central Europe and the western Balkans to Central Asia. With the ability and willingness to bear risk on behalf of its clients, EBRD helps its member countries to become open, market economies. EBRD is owned by 65 member countries, as well as the European Union and the European Investment Bank. EBRD fosters transition to market economies in countries from Central and Eastern Europe to Central Asia and North Africa.

The principal forms of direct financing provided by the EBRD are: (i) loans tailored to meet the particular requirements of a project, in which the credit risk may be taken entirely by the Bank or partly syndicated to the market; (ii) equity investments of a variety of forms - when the EBRD takes an equity stake, it expects an appropriate return on its investment and will only take a minority position. And (iii) guarantees to help borrowers gain access to financing.

EBRD is playing a major role in climate finance with 369 projects in 29 countries with total investments of €34 billion. Its investments in climate change include large-scale corporate energy efficiency, sustainable energy financing facilities through financial intermediaries, cleaner energy in the power sector, renewable energy, energy efficiency in municipal infrastructure, carbon market support, use of new global financing instruments and support of policy dialogue.

The Inter-American Development Bank

The Inter-American Development Bank (IDB) was established in 1959, and is the largest source of development financing for Latin America and the Caribbean. It has a strong commitment to achieve measurable results, increased integrity, transparency and accountability. IDB supports efforts by Latin America and Caribbean countries to reduce poverty and inequality and bring about development in a sustainable, climate-friendly way.

To respond to increasing demand for clients for assistance in addressing climate change, the Bank's General Capital Increase (GCI-9) commits its support of mitigation and adaptation efforts. GCI-9 sets a target of 25 per cent of total lending going to a growing portfolio on climate change, environmental sustainability, and renewable energy.

IDB has focused its mitigation activities on reducing emissions from deforestation and forest degradation, and activities for sustainable forest management. These include implantation of the REDD+ agenda as well as implementation of the Forest Investment Program (FIP) of the Climate Investment Funds (CIF) and the Guyana REDD+ Investment Fund (GRIF). IDB also supports the mainstreaming of renewable energy and energy efficiency technologies, including energy efficiency in the water and sanitation sector, and biogas and solar technologies in sectors such as agriculture, industry, housing, and commercial buildings.

2.1.6 Multilateral financial institutions

Several other banks and funds that lend to developing countries are also identified as multilateral development institutions, and are included under the broad category of Multilateral Financial Institutions (MFIs). These differ from the MDBs in that they have less broad ownership and membership structure or focus on special sectors or activities. Among these are:

i. The European Investment Bank (EIB) and the European Commission (EC, through some dedicated funds, as explained below)

ii. The Nordic Development Fund (NDF)

iii. Islamic Development Bank

iv. The OPEC Fund for International Development (OPEC Fund).

A number of sub-regional banks, established for development purposes, are also classified as MFIs because they are owned by a group of countries (typically borrowing members and not donors). Among these are banks such as Corporacion Andina de Fomento (CAF); Caribbean Development Bank (CDB); Central American Bank for Economic Integration (CABEI); East African Development Bank (EADB); and West African Development Bank.

While the MFIs were originally organised to focus on economic development and poverty reduction, they are now increasingly incorporating climate change into their core lending operations. However, some of these (Islamic Development Bank, OPEC Fund, and West African Development Bank) have not engaged in climate change mitigation activities and are not discussed further in this report.

MFI generally provide loans to national governments for a wide range of programmes and projects under very liberal terms. The loans are guaranteed by the government. During the last 10 to 15 years, there

have been a large number of MFI loans related to climate change mitigation. Complete listings of these programmes and projects can be obtained from the web sites of the MFIs.

It should be noted that while most MFI loans are sovereign loans with repayments guaranteed by national governments, some MFIs have also been engaged in other forms of financing, including (i) sub-sovereign or non-sovereign guarantee loans to local, provincial or state governments (for example, the ADB loan to the Indonesia Exim Bank for clean energy finance); (ADB, 2011) (ii) programmes involving loan or credit guarantees, provided to commercial banks and financial institutions to invest in climate change mitigation projects (for example, the IFC partial risk guarantee programmes in Eastern and Central Europe)[16], and (iii) loans (and sometimes equity investments) to private firms through some arms of the MFIs (such as the UN Foundation's Seed Capital Assistance Facility,[17] and the International Finance Corporation's Sustainable Energy Finance Facility).[18]

The MFIs have also established Special Climate Funds to finance mitigation programmes and projects. These are discussed below.

Table 2.1 shows the major MFIs and some of their activities related to climate change mitigation and development support.[19]

Table 2.1 Multilateral financial institutions

Name	Geographic coverage	Major mitigation activities
The World Bank (IDA & IBRD)	Worldwide	Substantially increased its lending for climate change mitigation activities; Established and operates Carbon Finance Facility and Carbon Partnership Fund; Responsible for managing a number of special climate funds including the Clean Technology Fund and Strategic Climate Fund; Has introduced the concept of Green Bonds to support mitigation activities.
International Finance Corporation (IFC)	Worldwide	Private sector arm of the World Bank Group; Finances debt and equity for private firms; Created the sustainable finance facility; Designed and implemented Partial Risk Guarantee Programmes and other risk-sharing facilities.

16 IFC, in cooperation with GEF, successfully issued partial credit guarantees for energy efficiency and renewable energy projects under the Hungarian Energy Efficiency Co-Financing Programme (HEECP) and the Commercialising Energy Efficiency Finance (CEEF) programme. (See IFC, 2004).

17 GEF and UN Foundation, Seed Capital Assistance Facility (SCAF), http://scaf-energy.org/about/introduction.html

18 International Finance Corporation, http://www.ifc.org/ifcext/globalfm.nsf/Content/Financial+Products

19 As indicated earlier in the report many of the activities of MFIs focus both on development and climate change. This table presents the major climate change mitigation related activities.

Name	Geographic coverage	Major mitigation activities
Multilateral Investment Guarantee Agency (MIGA)	Worldwide	Promote foreign direct investment (FDI) into developing countries to help support economic growth, reduce poverty, & improve people's lives; Guarantee against losses, and provide environmental and social expertise in its major sectors of focus.
Asian Development Bank (ADB)	Asia	Substantial commitments to increased financing of climate change mitigation; Established and operates a number of funds and financing facilities, including Clean Energy Finance Partnership, Energy for All, Energy Efficiency Initiative, Clean Energy Private Equity Partnership and Climate Change Fund.
African Development Bank (AfDB)	Africa	Has committed to increasing climate change mitigation financing; Established the Sustainable Energy Fund for Africa and the Congo Basin Ecosystems Conservation Programme.
European Investment Bank (EIB)	EU, Central and Eastern Europe	Substantial commitments to environmental sustainability and financing of climate change mitigation; Established and operates a number of funds and financing facilities, including Climate Change Technical Assistance Facility, EIB-KfW Carbon Programme, and Post-2012 Carbon Credit Facility.
European Bank for Reconstruction and Development (EBRD)	EU, Central and Eastern Europe	Has had an environment mandate since its inception and there is strong Senior Management recognition and support of sustainable energy and climate change; Established and operates the EBRD Carbon Fund and the Multilateral Carbon Credit Fund.
Inter-American Development Bank (IDB)	Latin America	Established the Sustainable Energy and Climate Change Initiative (SECCI) to mainstream RE, EE, and carbon finance for mitigation and adaptation; Also operates the Infrastructure Fund and the IDB Multilateral Investment Fund, both funds are now financing mitigation investments.
Corporacion Andina de Fomento (CAF)	Latin America	Established the Latin American Carbon, Clean and Alternative Energies Programme (PLAC+e); Strong focus on RE and EE and partnership with KfW for equity investment in Clean Energy; Also established Clean Technology Fund.

Name	Geographic coverage	Major mitigation activities
Central American Bank for Economic Integration (CABEI)	Central America	Promotes the integration and balanced economic and social development of Central American countries; Focuses on RE, EE, biofuels and rural electrification.
East African Development Bank (EADB)	East Africa	Promotes sustainable socio-economic development in East Africa by providing development finance, and advisory services; Is now increasing financing of mitigation projects.

Source: Compiled by the authors of this guidebook from various reports from the Overseas Development Institute and UNEP, and the web sites of these MFIs. A whole list of the funding sources checked is provided in Appendix I.

2.2 Special funds for climate change mitigation

Recognising that substantial funding beyond the project-based Clean Development Mechanism (CDM) under the Kyoto Protocol is needed, the MFIs, in partnership with national governments, BFIs, and Regional Development Banks, have established a number of special funds to support mitigation efforts in developing countries. Prominent amongst these are the two main Climate Investment Funds (CIFs) administered by the World Bank – the Clean Technology Fund (CTF) and the Strategic Climate Fund. The European Commission launched the Global Energy Efficiency and Renewable Energy Fund (GEEREF) in 2008,[20] and a group of 400 partners including 45 governments as well as a range of private companies and international organisations have established the Renewable Energy and Energy Efficiency Partnership (REEEP).[21] These funds are briefly reviewed below, followed by a listing of some of the other special climate funds.

2.2.1 Clean Technology Fund

The principal features of the CTF are:[22]

i. Utilising MDB capabilities to leverage private and public resources for low carbon investments

ii. Promoting environmental and development co-benefits to demonstrate how low carbon technologies can contribute to national development goals and strategies

iii. Providing concessional financing with a grant element tailored to cover the identifiable additional costs of the investment necessary to make the project viable.

The CTF seeks to have transformational impacts by supporting investment programmes that (i) constitute a dominant part of countries' low carbon development strategies; (ii) shape the course of markets for technology deployment; and/or (iii) transcend GHG emissions savings objectives by providing broader development and environmental benefits. The total funding of the CTF is US$4.6 billion, and all of the pledged resources have now been committed to 15 investment programmes in large developing countries. The investment programmes have focused on renewable energy (both grid-based and off-grid), energy efficiency (in buildings, industry and agriculture), and modal shifts and efficiency improvement in transport.

20 Global Energy Efficiency and Renewable Energy Fund, www.geeref.com
21 Renewable Energy and Energy Efficiency Partnership, http://www.reeep.org/31/home.htm
22 World Bank, Clean Technology Fund, http://www.climateinvestmentfunds.org

2.2.2 Strategic Climate Fund (SCF)

The Strategic Climate Fund (SCF) is an overarching fund to support targeted programmes with dedicated funding to pilot new approaches with potential for scaled-up, transformational action aimed at a specific climate change challenge or sectoral response. The SCF includes three targeted programmes: The Program on Scaling-Up Renewable Energy in Low Income Countries (SREP), the Forest Investment Program (FIP), and the Pilot Program for Climate Resilience (PPCR). As the PPCR is about adaptation, more details are given below only about the SREP and the FIP.

2.2.2.1 The Program on Scaling-Up Renewable Energy in Low Income Countries (SREP)

Approved in May 2009, the SREP aimed at demonstrating the economic, social and environmental viability of low carbon development pathways in the energy sector by creating new economic opportunities and increasing energy access through the use of renewable energy. It focuses on renewable energy projects such as wind and solar energy, small hydropower and biomass, and geothermal energy. The programme also considers cooking and heating projects as well as sustainable forests, biogas, and other renewable-based fuels. The total size of the SREP fund is US$318 million.[23]

The principal objectives of SREP are to:

i. Serve as a model in assisting low income countries to foster a transformational change to low carbon pathways by exploiting renewable energy potential

ii. Overcome economic and non-economic barriers to scale up private sector investments to achieve SREP objectives

iii. Highlight economic, social and environmental co-benefits of RE programmes

iv. Enable blended financing from multiple sources to enable scaling up of renewable energy programmes

v. Facilitate knowledge sharing and exchange of international experience and lessons.

2.2.2.2 The Forest Investment Program (FIP)

The Forest Investment Program (FIP) is another Strategic Climate Fund whose main objective is to initiate and facilitate transformational change in developing countries' forest related policies and practices. The programme was approved in May 2009 and the size of the fund is US$578 million.[24] It is designed to support developing countries' efforts to reduce emissions from deforestation and forest degradation by providing scaled-up bridge financing for readiness reforms and public and private investments. It will finance efforts to address the underlying causes of deforestation and forest degradation and to overcome barriers that have hindered past efforts to do so.

Other FIP objectives are to:

i. Facilitate the leveraging of additional and sustained financial resources for REDD, through a possible UNFCCC forest mechanism, leading to an effective and sustained reduction of deforestation and forest degradation, thereby enhancing the sustainable management of forests.

23 http://www.climateinvestmentfunds.org/cif/srep
24 http://www.climateinvestmentfunds.org/cif/fip

ii. Pilot replicable models to generate understanding and learning of the links between the implementation of forest-related investments, policies and measures and long-term emission reductions and conservation, sustainable management of forests and the enhancement of forest carbon stocks in developing countries.

2.2.3 Global Energy Efficiency and Renewable Energy Fund (GEEREF)

The Global Energy Efficiency and Renewable Energy Fund (GEEREF) is a public private partnership (PPP) set up by the European Commission, Germany and Norway in 2008 to maximise the leverage of public funds.[25] Structured as a 'Fund-of-Funds', GEEREF invests in private equity funds that provide equity finance to small and medium-sized project developers and enterprises. The major investors in GEEREF are the EU, and the governments of Germany and Norway. The US$169.5 million pledged to the GEEREF is administered by the European Investment Bank.

GEEREF invests exclusively in emerging markets outside the EU and particularly focuses on serving the needs of the ACP, which is a group of 79 African, Caribbean and Pacific developing countries. It also invests in Latin America, Asia and neighbouring states of the EU (except for Candidate Countries). Priority is given to investment in countries with policies and regulatory frameworks on energy efficiency and renewable energy.

GEEREF's focus is on:

i. Renewable energy, including but not limited to small hydro, solar, wind, biomass and geothermal

ii. Energy efficiency, including but not limited to waste heat recovery, energy management in buildings, cogeneration of heat and power, energy storage, and smart grids.

GEEREF does not directly provide funding to renewable energy and energy efficiency projects or enterprises, but rather invests in private equity funds that specialise in providing equity finance to small and medium-sized project developers and enterprises (SMEs). These private funds must have a pipeline of environmentally and financially sustainable projects and must meet strict investment criteria in order to qualify for GEEREF funding. As of 2011, funding for four commercial renewable energy investment funds in Asia, South Africa and Latin America has been approved.

2.2.4 Renewable Energy and Energy Efficiency Partnership (REEEP)

REEEP was created in 2002 at the World Summit on Sustainable Development in Johannesburg. It was first housed at the UK Foreign and Commonwealth Office in London, and then became an independent Austrian legal entity (NGO) in May 2004.

It now comprises 400 partners including 45 governments as well as a range of private companies and international organisations. Its mandate is to facilitate the transformation of energy systems by accelerating the uptake of renewables and energy efficiency technology, to reduce carbon emissions, increase energy security, and improve access to sustainable energy for the poor worldwide. Its principal objective is to develop the market for sustainable energy by:

25 Global Energy Efficiency and Renewable Energy Fund (GEEREF), http://geeref.com/

i. Assisting governments in creating favourable regulatory and policy frameworks

ii. Promoting innovative finance and business models to activate the private sector.

While REEEP is a global fund, its current focus is on Brazil, China, India, Indonesia and South Africa, as well as on a small number of projects in Sub-Saharan Africa. REEEP funds projects using a competitive bidding process. Proposals can be made by governments, regulators and development financial institutions (DFIs), as well as NGOs and private firms.

2.2.5 EBRD Sustainable Energy Finance Facilities (SEFFs)

The SEFF is one of the Sustainable Energy Initiatives (SEI) provided by the European Bank for Reconstruction and Development (EBRD). The geographic scope is countries from Central Europe to Central Asia. The SEFF combines credit lines with technical assistance to help local banks support hundreds of smaller sustainable energy projects. Currently, the SEFFs are being implemented through 40 local banks in 15 countries, including Georgia, Moldova, Ukraine, Kazakhstan, Russia, Turkey and the Western Balkans. By engaging the local financial sector, many of the barriers that prevent the identification and financing of sustainable energy investment opportunities can be overcome.

Financing is based on extending credit lines to local banks that participate in the facilities. Each credit line is specifically dedicated for on-lending to commercial and/or residential borrowers for the implementation of energy efficiency and renewable energy investment opportunities. The local banks use the credit lines to provide commercial loans, at their own risk, to borrowers with eligible investment opportunities.

2.2.6 South Africa Green Energy Efficiency Fund

The German Development Bank (KfW) has partnered with South Africa's Industrial Development Corporation (IDC) to establish a ZAR500 million (about US$65 million) facility called the Green Energy Efficiency Fund (GEEF) for financing energy efficiency and self-use renewable energy projects. The fund is intended to provide loans at a low interest rate and long repayment window to energy users in South Africa. The aim of GEEF is to improve energy efficiency, support renewable energies, and extend the range of financial products that IDC offers to EE/RE products, while also seizing the opportunity to make use of the international carbon market. The target groups are energy users, especially small and medium enterprises, as well as private and public households in South Africa.

2.2.7 Other special climate funds

A large number of other climate funds have been established by various international organisations. For example, GEF has established the Least Developed Countries Fund (LDCF) to address the needs of the 48 Least Developed Countries. Most of the MDBs have established special climate funds to address mitigation issues in their member countries. These include:

i. Asian Development Bank

ii. African Development Bank

iii. Caribbean Development Bank

iv. Inter-American Development Bank.

In addition, special climate funds have been established by E+Co, the Nordic Development Fund, UNDP, UNEP, and the UN Foundation. Some of the funds, such as the Seed Capital Assistance Facility (SCAF), provide seed financing to early stage clean energy enterprises and projects.

Other examples include the Green Energy Efficiency Fund (GEEF) in South Africa and EBRD's Sustainable Energy Efficiency Funds in various countries. These funds provide financing for energy efficiency and end-use renewable energy programmes.

Table 2.2 highlights some of the characteristics of the special climate funds. The table includes some country-specific funds (such as in South Africa, Indonesia and Brazil) because they have been created by pooling funding from different external financing sources, including MFIs and BFIs.

Table 2.2 Examples of Special Climate Funds

Fund name	Operated by	Funding amount	Focus
Clean Technology Fund	The World Bank	US$4.5 billion	Development and deployment of low-carbon technologies
SREP - Scaling-up Renewable Energy	The World Bank	US$318 million	Assist low income countries develop low carbon strategy
Forest Investment Program	The World Bank	US$578 million	Transformational change in forest policies of developing countries
Pilot Program for Climate Resilience	The World Bank	US$1 billion	Demonstrate policies for integrating climate issues in development planning
GEEREF	GEEREF Secretariat	€108 million	Cut greenhouse gas emissions and increase access to sustainable energy
REEEP	REEEP International Secretariat	US$318 million	Assist governments in creating favourable regulatory and policy frameworks
ADB Clean Energy Private Equity Funds	Asian Development Bank	US$100 million	Catalyse increased investment in clean energy projects
ADB Climate Change Fund	Asian Development Bank	US$40 million	Facilitate increased investment in climate change mitigation
AfDB Congo Basin Forest Fund	African Development Bank	£100 million	Support innovative forest management and reduce forest degradation
AfDB Sustainable Energy Fund for Africa	African Development Bank	US$57 million	Enhance the commercial viability and bankability of private sector projects
BNDES Amazon Fund	BNDES - Brazilian Development Bank	US$127 million	Preservation and sustainable use of forests in the Amazon Biome

Fund name	Operated by	Funding amount	Focus
CLIM-DEV Africa Special Fund	African Development Bank	US$136 million	Strengthen the institutional capacity to formulate and implement effective climate-sensitive policies
EBRD Sustainable Energy Finance Facilities	EBRD or Fund Management Team	Various (country-specific)	Facilitate implementation of EE & RE Projects
E&Co. CAREC Fund	E & Co.	N/A	Promote the use of renewable energy technologies
GEF Least Developed Countries Fund	Global Environment Facility	US$169 million	Address climate change issues of least developed countries
Green Energy Efficiency Fund	South Africa Industrial Development Corp.	US$65 million	Support EE & RE project development and extend the range of financial products
IDB Multilateral Investment Fund	Inter-American Development bank	US$600 million	Support increased competitiveness of SMEs related to climate change
Indonesia Climate Change Trust Fund	ICCTF Secretariat	US$5.4 million	Achieve Indonesia's goals of a low carbon economy
Mediterranean Investment facility	UNEP	US$10 million	Develop a vibrant, sustainable renewable energy market system
Nordic Development Fund	Nordic Development Fund Secretariat	€1.0 billion	Facilitate climate change investments in low-income countries
Seed Capital Assistance Facility	Global Environment Facility	US$10.5 million	Provide seed financing to early stage clean energy enterprises and projects
Special Climate Change Fund	Global Environment Facility	US$110 million	Support technology transfer projects and programmes for sustainable development
UNDP/Spain MDG Fund	UNDP	US$90 million	Support policies and programmes that promise significant and measurable impact on select Millennium Development Goals (MDGs)

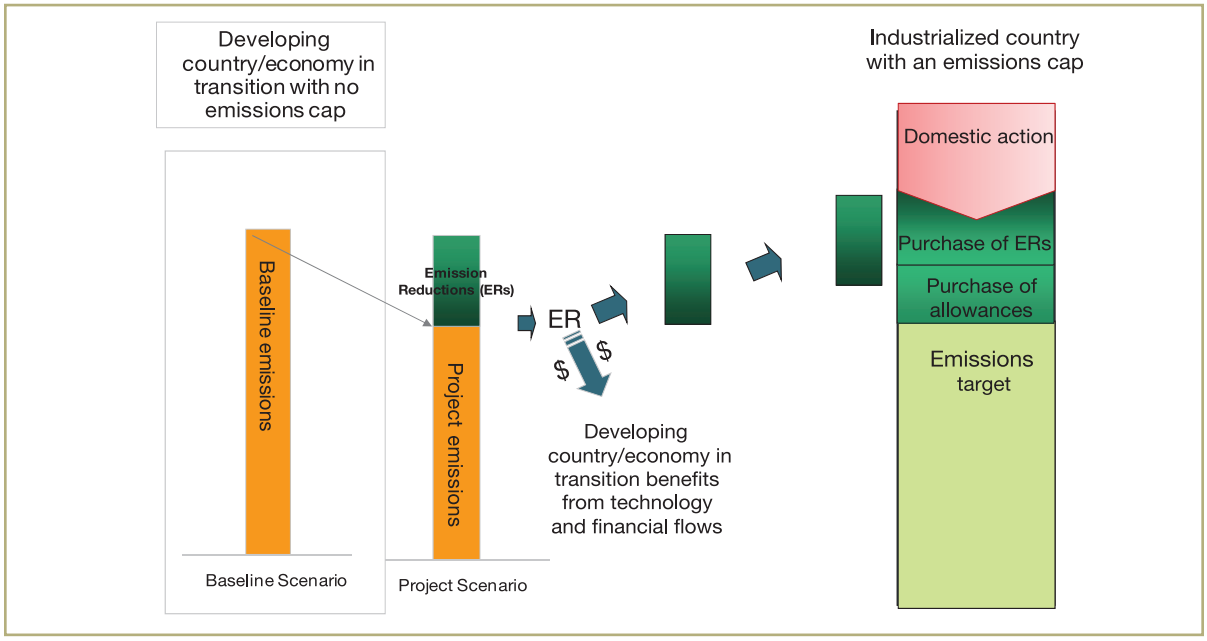
Source: Compiled by the authors of this guidebook

2.3 Carbon finance

2.3.1 The UNFCCC Clean Development Mechanism (CDM)

The Kyoto Protocol of the UNFCCC includes provisions for a Clean Development Mechanism (CDM), which gives monetary value to GHG reduction credits (known as certified emission reductions or CERs) achieved through projects implemented in developing countries.[26] These CERs can be sold to buyers in developed countries interested in meeting their compliance requirements for meeting carbon reduction targets cost-effectively. These buyers can be developed country governments with quantified commitments under the Kyoto Protocol or companies under national or regional emissions trading schemes, such as the EU Emissions Trading Scheme (EU, 2008). Figure 2.1 illustrates the contribution of the CDM to meeting a country's quantified emission limitation commitment.

Figure 2.1 CER trading under the clean development mechanism



Source: Elkhamlichi, 2010

By October 2011, a total of 3,497 CDM projects were registered. Of these 2,862 are in Asia and the Pacific, 553 in Latin America and the Caribbean, 71 in Africa, and 14 in Eastern Europe. Emerging economies have been the primary beneficiaries of the CDM, and these CDM projects are expected to produce some 1.5 billion tons of carbon dioxide equivalent (CO_2e) in emission reductions by the end of 2012. The economic benefits of carbon finance under CDM can be quite large and it has been estimated that carbon finance in 2009/2010 was about US$2.2 billion (Climate Policy Initiative, 2011).

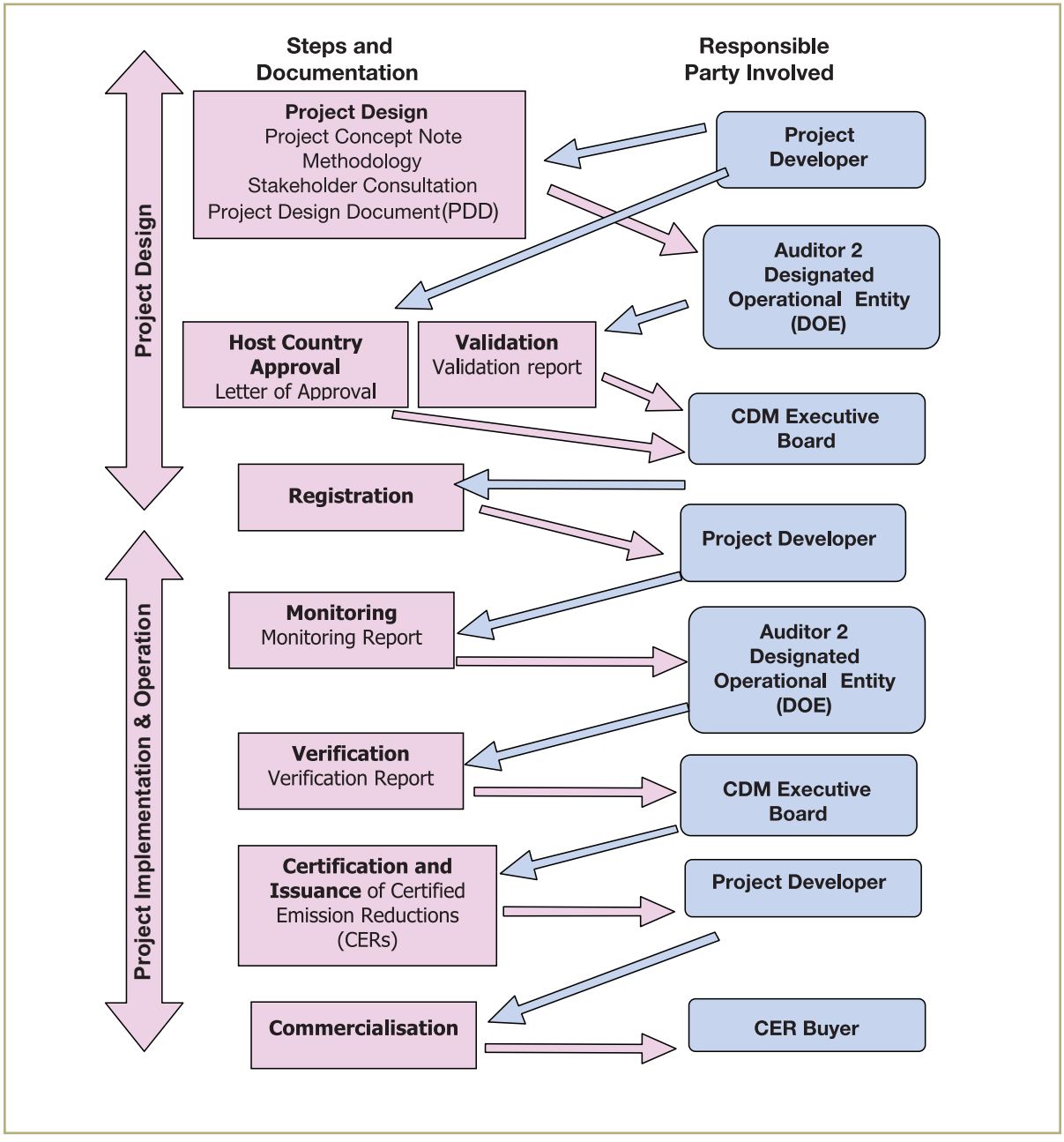
2.3.2 The CDM project cycle

CDM projects must qualify through a rigorous public registration and issuance process designed to ensure real, measurable, and verifiable emission reductions that are additional to what would have occurred without the project. In this process a distinction is made between small- and large-scale projects, whereby

26 UNFCCC, http://cdm.unfccc.int.

modalities for small-scale projects are simplified. The mechanism is overseen by the CDM Executive Board under the UNFCCC. To be considered for registration, a project must first be approved by the designated national authority in the country which hosts the project. To apply for CERs, a CDM project must determine the emission reductions during its lifetime, using a "baseline and monitoring methodology" that has been preapproved by the CDM Executive Board.[27] An illustration of the CDM project cycle is provided in Box 2.2. Figure 2.2 illustrates this cycle.

Figure 2.2 The CDM Project Cycle



Source – UNFCCC, http://cdm.unfccc.int

27 A description of the process and a listing of the approved methodologies can be found on the UNFCCC CDM website, http://cdm.unfccc.int.

Box 2.2 The CDM project cycle

Project Concept
A feasibility study of a potential offset project is conducted to assess its technical feasibility, investment requirements, development and operational costs, expected returns, administrative and legal hurdles, and project risks and pitfalls. Based on the results of the feasibility study, the project owner decides whether or not to continue development of the potential project.

Methodology
The project methodology defines the rules that a project developer needs to follow to establish a project baseline and to determine project additionality, to calculate emission reductions and to monitor the parameters used to estimate actual emission reductions. If no approved methodology exists for a specific project type, a project developer can submit a new methodology for approval.

Project Design Document (PDD)
The Project Design Document (PDD) describes the project activity in detail and forms the basis for all future planning and administrative procedures. It contains a description of the chosen technology and explains the methodology used to define the baseline scenario, to confirm additionality and to calculate emission reductions.

Stakeholder Consultation(s)
Projects under the CDM and under some of the voluntary standards are required to provide evidence that the project's activities will not adversely impact local populations and other relevant stakeholders.

Project Validation
Under CDM, after the project developer has written the PDD, an independent third-party auditor conducts the project validation. These auditors are called Designated Operational Entities or DOEs. The process of CDM project validation normally consists of four phases (i) desk review of the PDD; (ii) on-site visits and follow-up interviews with project stakeholders; (iii) a 30-day public comment period after the PDD has been made available through the internet; and (iv) resolution of outstanding issues and the issuance of the final validation report written by the DOE.

Host Country Approval
To obtain the final acceptance of a CDM project by the CDM Executive Board, project documentation must be submitted to the relevant host government authority, which checks the project activity against national rules and regulations and confirms the project's compliance with the host country's sustainability criteria.

Project Registration
The CDM Executive Board's decision to register a project is based on the review of the PDD, the validation report and public feedback. Once the CDM EB approves a project, it is officially registered as a CDM project.

contd.…

Project Implementation

Project implementation can begin at any time during the project cycle. However, if the project is implemented before it is registered by the CDM Executive Board, the project developer must supply documented evidence proving that it considered CDM revenues at the time of planning the project.

Project Monitoring

Project developers are required to maintain records measuring the emission reductions achieved during a project's operation phase. These records, maintained in a monitoring report, must be in accordance with the parameters and procedures laid out in the original PDD that was validated by the DOE and registered by the CDM EB.

Project Verification

The monitoring that the project developer has done is then evaluated and approved by a third party auditor. To minimise conflict of interest under the CDM, the validating auditor cannot also conduct project verification; a different auditor must be chosen for the task of Project Verification.

Project Certification

The verification report is submitted to the CDM EB for certification and issuance of CERs. The issued CERs are then transferred to the CDM registry account of the relevant project participant after the mandatory fees are paid to the UNFCCC Secretariat.

Transaction of Emission Reduction Credits

At the commercialisation stage, a project developer sells the carbon credits from a project to a buyer. The credits can either be sold directly to a company that uses them to meet its legally binding or voluntary emission reduction obligations, or they can be sold to a trading company that facilitates the sales transaction.

Source: Adapted from UNFCCC, http://cdm.unfccc.int; and Stockholm Environment Institute, http://www.co2offsetresearch.org/consumer/ProjectCycle.html

In 2007, UNFCCC approved the concept of programmatic CDM, also known as Programme of Activities (PoA), which can combine multiple small projects or mitigation activities (so-called individual CDM project activities or CPA) under a programme (Hinostroza et al., 2009). At the time of PoA registration, the PoA coordinator only needs to submit one typical CPA. The Programme duration can be up to 28 years, during which an unlimited number of similar CPAs can be added to the registered PoA (Hinostroza et al., 2009). In this way, the PoA approach makes it easier to roll out smaller-scale mitigation projects (such as lighting efficiency projects). It should be noted, however, that CDM financing generally provides only a small portion of the total project financing needs and is available only after the measurement and verification of actual mitigation impacts. Therefore, its value is primarily as supplemental financing rather than being the primary financing source for mitigation projects.

2.3.3 Role of CDM in financing mitigation projects

With the recent agreement in Durban at Conference of the Parties (COP) 17 to continue the Kyoto Protocol and CDM beyond 2012, CDM is likely to provide increasing financing options for mitigation projects.[28]

As a result of the CDM and the other flexible market mechanism under the Kyoto Protocol, it has been possible to monetise the emission reductions from climate change mitigation actions using the carbon markets. However, the transaction costs of working with the cap and trade systems and related markets can sometimes be high, particularly for smaller projects. For this reason some of the MFIs have created mechanisms to support the development of mitigation projects and facilitate the sale of the certified emission reduction (CER) credits from such projects.

Some of the best examples are the World Bank's 12 carbon funds and facilities which purchase the carbon credits from CDM projects in developing countries. The World Bank carbon finance covers a wide range of sectors, including projects relating to renewable energy, energy efficiency, urban infrastructure, waste management, pollution abatement, forestry, and water resource management.[29] The World Bank carbon fund and facilities are managed in cooperation with several industrialised countries that provide funding to the facilities in return for which they receive GHG emission reduction credits for their own compliance. The facilities enable these countries to benefit from the carbon market while using the World Bank infrastructure, network and expertise. The facilities offer project owners/developers possible upfront payments of up to 25% of the overall transaction amount and in some cases they covered purchases of carbon credits to be generated after the first commitment period of the Kyoto Protocol (post-2012). The facilities also may pay for carbon asset development costs in some cases.

Other carbon funds established by MFIs include:

1. **Asian Development Bank (ADB) –** ADB's Carbon Market Initiative (CMI) includes the Asia Pacific Carbon Fund (APCF) and Future Carbon Fund (FCF), established and managed to co-finance CDM projects by securing a portion of the expected future certified emission reductions (CERs) from CDM-eligible projects in exchange for upfront finance. CMI also provides technical support for CDM projects through the Technical Support Facility and marketing support for carbon credits through the Credit Marketing Facility (CMF).

2. **African Development Bank (AfDB) –** the AfDB's Africa Carbon Support Program assists in the preparation of Project Information Notes (PIN) and Project Design Documents (PDD) for CDM projects; supports the development of regional grid emission factor(s); and assists project owners to successfully commercialise the carbon potential of projects.

3. **The Carbon Partnership Facility (CPF) –** this facility is one of the World Bank's major new carbon finance instruments targeting the post-2012 period.

   It facilitates the implementation of low-carbon programmes across an array of sectors and technologies - energy generation and distribution, energy efficiency, and waste management - in situations where governments need policy measures or investments. The CPF comprises two trust funds: (i) the Carbon Asset Development Fund (CADF) to prepare and implement emission-reduction programmes, and (ii) the Carbon Fund (CF) to purchase carbon credits from the pool of emission reduction programmes.

28 United Nations Framework Convention on Climate Change, http://unfccc.int

29 The World Bank, www.carbonfinance.org

Unlike most previous carbon funds, the CPF has a balanced governance structure of buyers and sellers. As of 2011, the buyers include governments of Spain, Norway and Italy; the European Commission and Endesa SA; and E.ON Carbon Sourcing North America LLC. The CPF's main objectives are to develop emission reductions and support their purchase, on a larger scale through the provision of carbon finance to long-term investments. To scale up carbon finance, the CPF will collaborate with governments and market participants on investment programmes and sector-based interventions that are consistent with low-carbon economic growth and the sustainable development priorities of developing countries.

4. **EIB-KfW Carbon Programme II,** this programme represents an opportunity for selling and purchasing carbon emission credits in Least Developed Countries (LDCs) which have traditionally been under-represented in CDM project portfolios and need further support. It also facilitates credits to be regulated under their post- 2012 successor programme(s).

5. **Multilateral Carbon Credit Fund (MCCF),** sponsored by EIB and EBRD, with sovereign participants including Finland, Belgium (Flanders), Ireland, Luxembourg, Spain and Sweden, and private participants CEZ (Czech Rep.), Endesa (Spain), Gas Natural (Spain), PPC (Greece), Union Fenosa (Spain) and Zeroemissions (Spain). The MCCF is one of the few carbon funds dedicated specifically to countries from central Europe to central Asia.

6. **The UNDP MDG Carbon Facility,** sponsored by UNDP and Fortis Bank, targets projects in (i) countries which are either under-represented in carbon finance, and/or (ii) which achieve outcomes which contribute to the host's Millennium Development Goals. UNDP works with project developers towards emission reductions and then partners with buyers (either private sector or government) to purchase the credits generated by the project.

The key characteristics of these funds are shown in Table 2.3

Table 2.3 Carbon funds

Fund name	Operated by	Fund size	Characteristics
ADB Asia-Pacific Carbon Fund	Asian Development Bank	US$152 million	Upfront financing of up to 75% of expected CER volume
ADB Future Carbon Fund	Asian Development Bank	US$115 million	Upfront financing of up to 50% of expected CER volume
AfDB African Carbon Support Program	Asian Development Bank	N/A	Assists in the development of PINs and PDDs
African Carbon Asset Development Facility	UNEP	US$87 million	Technical assistance, transaction cost sharing, and financial institution outreach
Carbon Finance for Agriculture, Silviculture, etc.	Fonds Français pour l'Environnement Mondial	€2.3 million	Capacity building, project development, knowledge management

Fund name	Operated by	Fund size	Characteristics
EIB-KfW Carbon Programme II	European Investment Bank	€100 million	Purchase carbon credits from LDCs vulnerable to climate change
EIB Post-2012 Carbon Credit Fund	European Investment Bank	€125 million	Purchase CERs with vintages 2013-2020
Forest Carbon Partnership Facility (FCPF)	The World Bank	US$160 million	Assist in preparing for a large-scale reduction of emissions from deforestation and land degradation
Multilateral Carbon Credit Fund (MCCF)	European Investment Bank	€208.5 million	Carbon fund dedicated specifically to countries from Central Europe to Central Asia
UNDP/MDG Carbon Facility	UNDP	Project-specific	Promote emission reduction projects which contribute to the Millennium Development Goals
World Bank Carbon Funds and Facilities	The World Bank	US$2.5 billion	Possible upfront payment (up to 25% of transaction amount) and some possible post-2012 purchase
World Bank Carbon Partnership Facility (CPF)	The World Bank	N/A	Provision of carbon finance for the long-term (post-2012 period)

Source: Compiled by the authors of this guidebook

2.4 Bilateral financing sources

2.4.1 Introduction

A bilateral financing institution (BFI) is a financing organisation created and directed by a national government for the purpose of giving aid or investing in targeted development projects and programmes in developing countries and emerging markets. Developed countries decide the mandates of their BFIs based on the governments' strategic development assistance objectives and interests on specific geographic areas and technologies.

Some OECD countries also have bilateral development cooperation agencies whose activities are often similar to those of BFIs. However, development cooperation agencies and BFIs differ in mandate and purpose, to the extent that BFIs exist as banks, with a profit as well as a development objective, while the development cooperation agencies often provide grants to developing countries. Furthermore, bilateral development cooperation agencies generally fall under the auspices of 'development' ministries, while BFIs are generally under finance ministries.

For example, in Germany, the German Federal Ministry for Economic Cooperation and Development (known as BMZ) is the government authority defining the fundamental principles of the country's development policy

and its development cooperation with partner countries and at the international level. BMZ has two major implementing organisations, the KfW[30] and the GIZ[31], that execute the German government's development projects. KfW is responsible for financial cooperation and provides development loans, promotional loans, and credit lines, and is increasingly developing public-private partnerships with a major emphasis of all of these financing mechanisms on energy efficiency and renewable energy. GIZ is responsible for technical cooperation with Germany's partner countries, for preparing and sending out development workers, and for human resources development and further training.

Table 2.4 provides examples of bilateral financing institutions and development cooperation agencies from selected countries.

Table 2.4 Examples of bilateral financing institutions and development cooperation agencies

Country	Financing institution	Development cooperation agency
Germany	KfW	BMZ
France	Agence Francaise de Developpement (AfD)	Agence Francaise de Developpement (AfD)
Japan	Japan Bank for International Cooperation	Japan International Cooperation Agency
Netherlands	Netherlands Development Finance Company	Ministry of Development Cooperation
Norway	Norwegian Agency for Development Cooperation	Ministry of Foreign Affairs - International Development Program
Sweden	Swedfund International AB	Swedish International Development Agency (SIDA)
USA	Overseas Private Investment Corporation (OPIC)	U.S. Agency for International Development (USAID)

Source: Compiled by the authors of this guidebook

Despite differences in mandate and purpose, development/cooperation agencies and BFIs share many considerations with respect to their climate portfolios. In addition, both have integrated climate change considerations into their regular operations.

Bilateral financing institutions (BFIs) have for decades played a key role in providing aid and investments to developing countries. Over the last 10 to 15 years they have integrated climate finance into their development activities and are now very significant agents in delivering finance for climate change.

Because the BFIs design their financing strategies and programmes based on the strategic framework set by their respective national governments, they generally operate independently of each other. However, in some cases, they have collaborated with multilateral financing institutions and other BFIs in financing programmes for specific countries or in creating special climate funds.

30 KfW is the acronym for Kreditanstalt fur Wiederaufbau.
31 GIZ is the acronym for Gesellschaft für Internationale Zusammenarbeit.

2.4.2 Major BFIs

A list of the major BFIs is provided in Box 2.3. These organisations are members of the OECD Development Assistance Committee (DAC). Most of these (but not all) have some programmes for financing climate change mitigation. Examples of some of the leading BFIs are provided later in this section.

In addition to the BFIs shown in Box 2.3, agencies of other governments have also provided financing for climate change mitigation, or contributed to special funds for mitigation.[32] For example the Italian Ministry of Environment, Land and Sea has helped establish the Mediterranean Investment Facility in collaboration with UNEP.[33]

Some of the BFIs target certain selected developing countries (or regions). Some of them require that the funding application from the developing countries should include developed country partners (usually from the country or region represented by the BFI) or that the applications give preferences to the products or services from the financing country or region.

It should be noted that in recent years some non-members of OECD DAC, have established bilateral aid programmes for lesser developed nations. These include some of the newer members of the EU (such as the Czech Republic, Hungary and Poland); countries engaged in 'South-South' cooperation, such as China, India, Brazil and South Africa; and Arab countries, such as Saudi Arabia and the United Arab Emirates (UAE) (OECD, 2008). However, most of these new development funding sources do not have clear focus on climate change mitigation, therefore they are not addressed in more detail in this report.

Box 2.3 List of bilateral financing institutions

1. Australian Agency for International Development (AusAID)
2. Austrian Development Agency (ADA)
3. Canadian International Development Agency (CIDA)
4. Danish International Development Agency (DANIDA)
5. Department for International Development (DFID) – U.K.
6. Department for International Development Cooperation (Finland)
7. Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)
8. French Agency for Development (Agence Francaise de Developpement - AfD)
9. German Bank for Reconstruction and Development (Kreditanstalt fur Wiederaufbau - KfW)
10. Ireland Development Cooperation

contd.…

32 It could be argued that the World Bank Carbon Market Facilities discussed in the above section are also bilateral funding sources, as funds are mainly provided by developed countries (donors) through the World Bank. The distinction between MFIs and BFIs is sometimes not very clear because many BFIs provide funds to the World Bank or ADB to manage. This report has represented these as MFI since the World Bank is responsible for operating the funds.

33 See UNEP, http://www.unep.org/climatechange/finance/LoanProgrammes/MEDREP/tabid/29557/Default.aspx

11. Japan International Cooperation Agency (JICA)
12. Netherlands Development Cooperation
13. New Zealand Official Development Assistance (NZODA)
14. Norwegian Agency for Development Cooperation
15. Spanish Agency for International Development Cooperation
16. South Africa Industrial Development Corporation (IDC)
17. Swedish International Development Cooperation Agency (SIDA)
18. U.S. Agency for International Development (USAID)

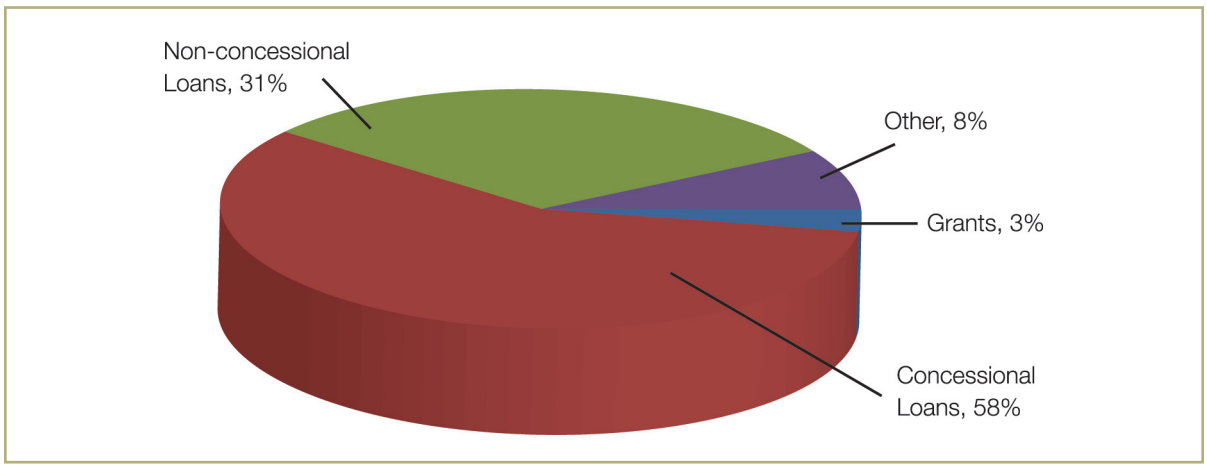
Source: Compiled by the authors of this guidebook

2.4.3 Financing approaches used by BFIs

The financing mechanisms used by BFIs are generally similar to those used by the MFIs. They mainly include concessional loans,[34] market-based (non-concessional) loans, and grants. Concessional loans (which represent the majority of BFI financing) are provided to improve the economic attractiveness of mitigation programmes and projects and to leverage financing from commercial financial institutions. Market-based financing is provided when the individual projects are economically attractive but there are limitations on the availability of funds. Grants from BFIs are not common. These may be provided in cases where mitigation projects are unlikely to be implemented with conventional financing or with concessional loans.

Figure 2.3 illustrates the distribution of the financing mechanisms for mitigation activities from some of the leading BFIs.

Figure 2.3 Distribution of financing mechanisms from leading BFIs



Source: UNEP, 2010a.

34 A concessional loan offers more attractive financing terms than a conventional (non-concessional) loan. It may include: lower interest rate, longer tenure, and longer grace period.

2.4.4 Role of BFIs in special climate funds

Many bilateral agencies have participated in the establishment of special funds for climate change mitigation. For example, the Clean Technology Fund, managed and operated by the World Bank, includes contributions from Australia, France, Germany, Japan, Spain, Sweden, the United Kingdom, and the United States. The E+Co CAREC fund includes contributions from Belgium, Finland and the Netherlands, and Germany and Norway are major contributors to the GEEREF.

Table 2.5 provides examples of the participation of various countries in selected special funds for climate change mitigation.

Table 2.5 Examples of BFI participation in special funds for climate change mitigation

Fund	Participating countries
Clean Technology Fund	Australia, France, Germany, Japan, Spain, Sweden, United Kingdom, United States
Caribbean Development Bank – Special Development Fund	Canada, France, Germany, Italy, United Kingdom
E+Co. CAREC Fund	Belgium, Finland, Netherlands
GEEREF	Germany, Norway
IDB – Multilateral Investment Fund	39 donor countries from Latin America, the Caribbean, North America, Europe and Asia
Indonesia Climate Change Trust Fund	United Kingdom, Australia, Sweden
Mediterranean Investment Facility	Italy
Nordic Development Fund	Denmark, Finland, Iceland, Norway and Sweden
UNDP/Spain MDG Achievement Fund	Spain

Source: Compiled by the authors of this guidebook

BFIs have also participated in the establishment of carbon funds. By the end of 2011, the KfW Carbon Fund has concluded contracts for the purchase of over 40 million carbon credits from 92 CDM projects in over 10 countries. KfW has also partnered with the European Investment Bank to establish the EIB-KfW Carbon Programme and the Post-2012 Carbon Credit Fund, the first fund to purchase carbon credits beyond end of the Kyoto Protocol's first commitment period.

The Nordic Environment Finance Company (NEFCO) operates three carbon finance funds – the Nordic Climate Facility, the NEFCO Carbon Fund (NeCF) and the Baltic Sea Region Testing Ground Facility (TGF). The Nordic Climate Facility finances projects that have a potential to combat climate change and reduce poverty in low-income countries. Both the TGF and the NeCF are structured as public-private partnerships for purchasing carbon credits from mitigation programmes and projects. The difference is that the TGF focuses on the Baltic Sea Region, while the NeCF is a global carbon fund. As of August 2011, the NeCF has financial resources of up to EUR165.3 million. It also procures credits from CDM projects in the post-Kyoto period up to the maximum of the first crediting period of the project (7 or 10 years).

The Nordic Climate Facility (NCF) finances projects that have a potential to combat climate change and reduce poverty in low-income countries. NCF encourages and promotes technological innovation in areas susceptible to climate change such as: energy, transport, water and sanitation, health, agriculture, forestry as well as other areas related to natural resource management. Once every year, NCF calls for innovative proposals related to climate change. The best proposals can receive grant financing of between €250,000 and 500,000, or, in exceptional circumstances, between €150,000 and 250,000.

Climate mitigation proposals can involve efforts to reduce the emission of greenhouse gases by utilising energy efficiency technologies, substituting fossil fuels for environmentally-sound renewable sources, and carbon sequestration. The climate change themes vary each year. NCF covers a number of countries in Africa, Asia and Latin America. The Japan International Cooperation Agency (JICA) provides funding to the World Bank Carbon Finance Facility to assist developing countries in accessing the carbon markets.

2.4.5 Examples of leading BFIs

This section provides an overview of the mitigation financing programmes of three of the largest bilateral financing institutions.

2.4.5.1 Japan International Cooperation Agency (JICA)

Japan has been one of the largest bilateral financing sources for several decades. The Japan International Cooperation Agency (JICA) was among the main organisations providing Japanese aid. In 2008, Japan brought together all of its international development operations to form one 'new JICA', merging the former operations of the Japan Bank of International Cooperation (which provided overseas development assistance or ODA loans), the Ministry of Foreign Affairs (which provided grant aid), and the old JICA (which provided technical assistance). The Ministry of Foreign Affairs still plays a role in governing ODA loans.

JICA has focused on low-carbon development as a cornerstone of its climate change mitigation strategy. JICA's programmes related to climate change mitigation include technical cooperation, grants and development loans. JICA has also developed a Climate Finance Impact Tool (Climate-FIT) for mitigation to help the estimation of GHG emission reduction from mitigation actions.[35]

Examples of mitigation activities funded by JICA include:

i. Low-Carbon Strategy Development Project for Indonesia

ii. Mass transit system in Bangkok

iii. Sahara Solar Energy Center in Algeria

iv. Integrated Solar Combined Cycle Power Plant in Egypt

v. Photovoltaic Rural Electrification and Water Supply Project in Tunisia

vii Concessional line of Credit for Energy Efficiency Improvement in Small and Medium Industries in India.

35 Additional discussion of this tool is provided later in the discussion of measurement, reporting and verification.

Japan is now integrating its mitigation financing activities under a new initiative called Fast Start Finance, which covers all of Japan's activities relating to climate change, and involves several agencies across public and private sectors. It includes the activities of:

i. JICA - the Japanese International Cooperation Agency

ii. JBIC - the Japanese Bank for International Cooperation

iii. NEXI - the Nippon Export and Investment Insurance agency, which provides trade insurance

iv. Private sector financial institutions and investors.

2.4.5.2 KfW, Germany

In Germany, international development operations are shared between different state agencies. This includes ODA loans delivered by KfW Development Bank; technical assistance provided by Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH or GIZ (formerly known as GTZ); grant aid from the Federal Ministry for Economic Cooperation and Development (BMZ); and capacity building assistance provided by INWENT.[36] Of these, the most prominent BFI is KfW.

KfW has become a leading environmental and climate finance institution. It is continuously expanding its activities on behalf of the German Government. In 2010, KfW made new financing commitments of €4.5 billion, of which €2.6 billion was committed for environmental and climate-relevant programmes and projects. Renewable energy and energy efficiency activities together accounted for 41 per cent of the volume of total new commitments. The remaining financing was for water and waste management, forestry, agriculture, transport and infrastructure.

The financing mechanisms used by KfW include grants, development loans, promotional loans, and credit lines. KfW is increasingly developing public private partnerships, and engaging in project financing, including both debt and equity. Both of these mechanisms are designed to leverage private financing.

Illustrative programmes and projects financed by KfW include:

i. Energy efficiency programme for the SME sector in India

ii. Solar energy development in Brazil

iii. Wind farm on the Red Sea in Egypt

iv. Efficient transport in China

v. Forest conservation in Nicaragua

vi. Green Energy Efficiency Fund in South Africa (implemented by the South African IDC).

36 INWENT is the former Capacity Building International, Germany, a non-profit organisation with worldwide operations dedicated to human resource development, advanced training and dialogue. It has now been incorporated into the GIZ.

2.4.5.3 AfD, France

The AfD works on behalf of the French government to finance development in accordance with French overseas development assistance policies. The primary objectives of AfD's strategic orientation are:

i. Provide a diversified range of services including advice, capacity building and financing

ii. Aim for AfD's financing commitments to contribute to at least 40% of each of its three primary goals: promoting economic growth, fighting poverty and preserving 'Global Public Goods', which includes fighting climate change

iii. Dedicate at least 80% of all grant funding and 60% of France's development aid contribution to AfD's budget to interventions in sub-Saharan Africa

iv. Implement a strategy for interventions in emerging countries based on managing Global Public Goods of benefit to all humanity, such as fighting climate change and pandemics, and preserving biodiversity.

AfD directs 50% of its financing commitments to non-sovereign entities, such as local governments and authorities, businesses and non-governmental organisations.

In 2009, AfD committed over €6.2 billion to more than 60 developing countries in Africa, Asia, the Mediterranean Basin, the Middle East, South America, and the French Overseas Territories. The financing mechanisms used by AfD include loans, subsidies, guarantees, and financing of debt reduction-development contracts. AfD also provides equity investments through its subsidiary PROPARCO which works with the private sector.

AfD, in cooperation with JICA, has pioneered a new approach in Indonesia in providing funding to the Indonesian government in integrating climate change mitigation into its economic development strategy. AfD has contributed US$500 million to this Climate Change Program Loan (CCPL). AfD has also financed credit lines for energy efficiency improvement in India, China, Turkey and Tunisia.

AfD also operates the French Global Environment Facility, which has provided grants to a number of climate change mitigation programmes and projects, and has partnered with the World Bank in the Africa Assistance programme to support CDM in sub-Saharan Africa.

2.4.5.4 Summary of bilateral financing sources

Table 2.6 provides an overview of the bilateral financing sources.

Table 2.6 Summary of bilateral financing sources

Financing source	Funding provided by	Major activities
AFD – French Development Agency	Government of France	Assistance to over 70 countries in sustainable development
AusAID - Community Based Climate Change Action Grants	Government of Australia	Financing environmental sustainability in Southeast Asia and the Pacific
Austrian Development Cooperation (ADC) Energy and Environment Partnership Programme	Government of Austria	Sustainable development in Southern and Eastern Africa
DANIDA (Danish International Development Agency)	Government of Denmark	Environmental protection and climate change mitigation in developing countries worldwide
Guyana REDD + Investment Fund (GRIF)	Government of Norway	Pay for limiting GHG emissions from deforestation and forest degradation in Guyana
International Climate Fund (Formerly ETF-IW)	Government of U.K.	Drive urgent action to tackle climate change by supporting low carbon growth
International Climate Initiative	Government of Germany	Promote climate-friendly development in developing countries
International Forest Carbon Initiative (IFCI)	Government of Australia	Demonstration activities to show how REDD+ can be included in a post-2012 global climate change agreement
Japan Bank for International Development (JBIC)	Government of Japan	Loans for renewable energy and energy efficiency in developing countries
JICA - Japan's Fast Start Finance	Government of Japan	Coordinate and implement all of Japan's activities relating to climate change
JAPAN - The Hatoyama Initiative	Government of Japan	Mitigation assistance for energy savings, energy efficiency technologies, and new, clean energy
KfW - Kreditanstalt fur Wiederaufbau	Government of Germany	Sustainable climate-friendly economic development in over 100 countries
KfW CHILE - CORFO Credit Line Program	Government of Germany	Financing of projects which provide cleaner and more efficient production
KfW - Fund Solutions for Climate Finance	Government of Germany	Public-private partnership to enhance energy efficiency and foster renewable energies
OPIC - Overseas Private Investment Corporation	Government of the USA	Mobilise private capital for sustainable development
USAID – Global Climate Change Initiative	Government of the USA	Promote climate solutions that spur economic growth and ensure sustainability

Source: Compiled by the authors of this guidebook

2.5 Characteristics of multilateral and bilateral financing sources

2.5.1 Geographic focus

The geographic focus of the multilateral and bilateral funding sources varies significantly. Appendix I contains a list of these financing sources (including special climate funds and carbon funds) on the regional focus. A summary is provided here.

2.5.1.1 MFIs

Among the MFIs, the World Bank (and the various agencies in the World Bank Group) covers climate change mitigation activities throughout the entire developing world. There are regional groups within each of the various World Bank Group members that focus on various developing regions of the world.

Similarly, agencies of the United Nations, such as the UNDP and UNEP have worldwide coverage for climate change mitigation, and have initiated climate change mitigation activities in many parts of the developing world. One UNEP initiative, the Mediterranean Investment Facility established in cooperation with the Italian Ministry of Environment, Land, and Sea, addresses only the Mediterranean region.

The other MFIs are regionally focused and their scope of climate change mitigation activities is within their region. Table 2.1 above provides information on the major MFIs and their geographic coverage.

2.5.1.2 Special climate funds

As indicated above, the MFIs (sometimes in cooperation with BFIs) have established a number of special funds for climate change mitigation. These funds have varying geographic coverage. Some of the special funds established under the UNFCCC and managed by the World Bank, such as the Clean Technology Fund and the Strategic Climate Funds (which include SREP, FIP, and PPCR) have worldwide coverage and are available as financing sources for most developing countries. Similarly GEEREF has a worldwide scope. REEEP also has worldwide scope, although in the current funding round the priority countries are Brazil, China, India, Indonesia and South Africa, as well as a small number of countries in Sub-Saharan Africa.

Other special funds have a narrower geographic coverage. The GEF Least Developed Countries Fund (LDCF) addresses the 48 Least Developed Countries. The UNDP/Spain MDG fund covers 50 countries from Africa, Asia, Latin America and the Caribbean, Arab States and Eastern Europe.

The special climate funds developed by the various MDBs, other than the World Bank (for example, the Clean Energy Private Equity Funds established by the Asian Development Bank and the Sustainable Energy Fund developed by the African Development Bank) focus on the target countries of those MDBs. One fund, the Indonesia Climate Change Trust Fund is targeted at Indonesia only.

Table 2.7 shows the geographic coverage of all of the funds listed in Appendix I.

Table 2.7 Geographic coverage of special funds for climate change mitigation

Fund name	Geographic coverage
Clean Technology Fund	Worldwide
SREP - Scaling-up Renewable Energy	Worldwide
Forest Investment Program	Worldwide
Pilot Program for Climate Resilience	Worldwide
GEEREF	Worldwide
REEEP	Worldwide (current funding cycle emphasises Brazil, China, India, Indonesia and South Africa, as well as a small number of countries in Sub-Saharan Africa
ADB Clean Energy Private Equity Funds	ADB developing member countries
ADB Climate Change Fund	ADB developing member countries
AfDB Congo Basin Forest Fund	COMIFAC member countries (Burundi, Cameroon, Congo, Gabon, Equatorial Guinea, Central African Republic, Democratic Republic of Congo, Rwanda, Sao Tome & Principe and Chad).
AfDB Sustainable Energy Fund for Africa	AfDB developing member countries
BNDES Amazon Fund	Amazon Basin countries
CLIM-DEV Africa Special Fund	AfDB developing member countries
EBRD Sustainable Energy Finance facilities	Various countries including Georgia, Moldova, Ukraine, Kazakhstan, and Turkey
E&Co. CAREC Fund	Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama
GEF Least Developed Countries Fund	48 Least Developed Countries
Green Energy Efficiency Fund	South Africa
IDB Multilateral Investment Fund	Countries in Latin America and the Caribbean
Indonesia Climate Change Trust Fund	Indonesia
Mediterranean Investment facility	Mediterranean Region
Nordic Development Fund	Designated countries in Africa, Asia and Latin America
Seed Capital Assistance Facility	GEF eligible countries in Asia or Africa
Special Climate Change Fund	Asia-Pacific, Africa, South and Central America, Small Island Developing States, Least Developed Countries
UNDP/Spain MDG Fund	50 countries from Africa, Asia, Latin America and the Caribbean, Arab States and Eastern Europe

Source: Compiled by the authors of this guidebook

2.5.1.3 Carbon funds

The geographic coverage of the carbon funds is analogous to that of the special climate funds. The carbon funds established by the World Bank have worldwide coverage while other carbon funds have narrower geographic coverage.

Table 2.8 shows the geographic coverage of the carbon funds.

Table 2.8 Geographic coverage of carbon funds

Fund name	Geographic coverage
ADB Asia-Pacific Carbon Fund	ADB developing member countries
ADB Future Carbon Fund	ADB developing member countries
AfDB African Carbon Market Support Program	AfDB developing member countries
African Carbon Asset Development Facility	Sub-Saharan Africa
Carbon Finance for Agriculture, Silviculture, etc.	Bénin, Cameroon, Dem. Rep. of the Congo, Gabon, Madagascar, Mali, and Sénégal
EIB-KfW Carbon Programme II	LDCs that are especially vulnerable to the effects of climate change
EIB Post-2012 Carbon Credit Fund	All CDM and JI host countries
Forest Carbon Partnership Facility (FCPF)	Worldwide
Multilateral Carbon Credit Fund (MCCF)	Region of EBRD countries of operation (Eastern Europe and Central Asia)
UNDP/MDG Carbon Facility	Countries that are under-represented in carbon finance
World Bank Carbon Funds and Facilities	Worldwide
World Bank Carbon Partnership Facility (CPF)	Worldwide (current participants are Brazil, Morocco, Vietnam, Jordan, Thailand and Tanzania)

Source: Compiled by the authors of this guidebook

2.5.1.4 BFIs

The geographic coverage of the larger BFIs, such as those funded by the Governments of Japan, Germany and France, is worldwide. Similarly, the initiatives of the U.K. and U.S. governments, as well as Denmark, cover many developing nations. Some other bilateral sources cover smaller geographic areas. For example, the Brazil BNDES fund addresses the Amazon region while Australian aid programmes focus on Southeast Asia and the Pacific.

Table 2.9 summarises the geographic coverage of the bilateral financing sources.

Table 2.9 Geographic coverage of the bilateral financing sources

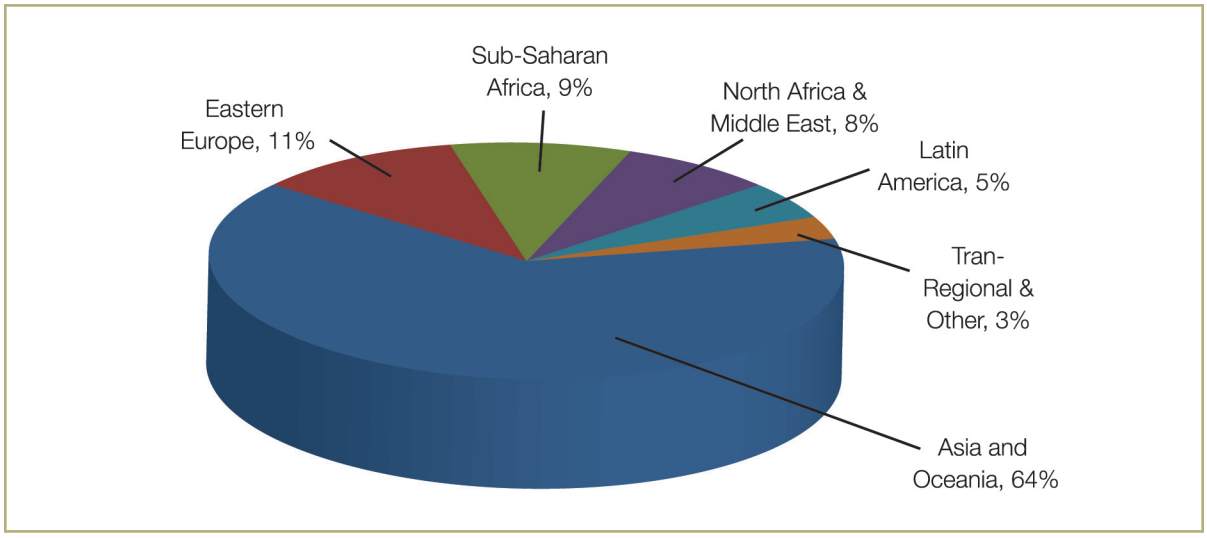
Bilateral financing source	Geographic scope
AFD – French Development Agency	Developing countries worldwide
AusAID - Community Based Climate Change Action Grants	Southeast Asia and the Pacific
Austrian Development Cooperation (ADC) Energy and Environment Partnership Programme	Southern and Eastern Africa
DANIDA (Danish International Development Agency)	Developing countries worldwide
Guyana REDD + Investment Fund (GRIF)	Guyana
International Climate Fund (Formerly ETF-IW)	Developing countries worldwide
International Climate Initiative	Developing countries worldwide
International Forest Carbon Initiative (IFCI)	Southeast Asia and the Pacific
Japan Bank for International Development (JBIC)	Developing countries worldwide
JICA - Japan's Fast Start Finance	Developing countries worldwide
JAPAN - The Hatoyama Initiative	Developing countries worldwide
KfW - Kreditanstalt fur Wiederaufbau	Developing countries worldwide
KfW CHILE - CORFO Credit Line Program	Chile
KfW - Fund Solutions for Climate Finance	Developing countries worldwide
OPIC - Overseas Private Investment Corporation	Developing countries worldwide
USAID – Global Climate Change Initiative	Developing countries worldwide

Source: Compiled by the authors of this guidebook

2.5.1.5 Regional distribution

The regional distribution of climate financing is not easy to determine. A recent study (Stockholm Environment Institute, 2009) looked at the regional distribution of climate financing by three major bilateral financing institutions (JICA, KfW and AfD) and one major multilateral financing source (EIB). The results of that study are shown in Figure 2.4. The largest share of the financing is in Asia and Oceania, which accounts for 64% of the total. The next highest is Central and Eastern Europe with 11%, followed by Sub-Saharan Africa with 9%, and North Africa and Middle East at 8%. Smaller shares are shown for Latin America (5%) and trans-regional and other (including French overseas territories) at 3%.

Figure 2.4 – Regional distribution of deployment of multilateral and bilateral financing for mitigation (Includes information from JICA, KfW, AfD and EIB)



Source: Stockholm Environment Institute, 2009.

2.5.2 Focus on technologies and sectors

Most of the financing sources for climate change mitigation cover a wide range of mitigation technologies. Many of them focus on energy technologies and include:

1. Renewable energy, including
    a. Thermal solar (Solar Water Heaters)
    b. Photo Voltaic Solar (PV Solar)
    c. Wind energy
    d. Small hydropower
    e. Biomass conversion to gas or electricity
    f. Biofuels
2. Energy efficiency in
    a. Industry
    b. Buildings
    c. Homes
    d. Public facilities
    e. Transportation
    f. Agriculture

g. Street lighting

h. District heating and cooling

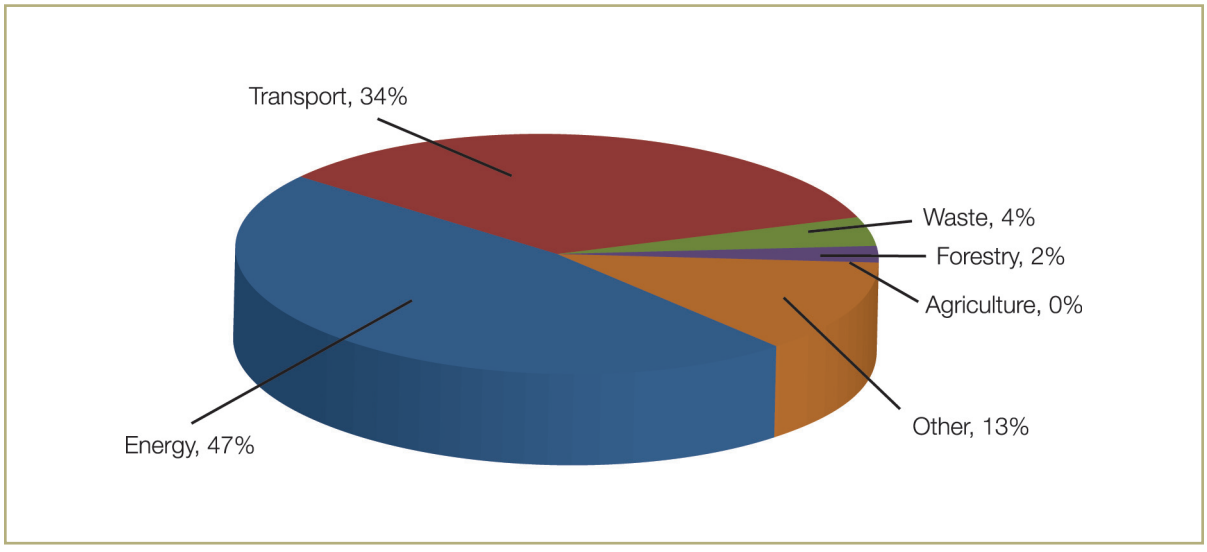
3. Power sector efficiency improvement (generation, transmission, distribution)
4. Waste heat recovery
5. Waste conversion to electricity
6. Clean distributed generation.

Some of the financing sources are selective in addressing only some of the above. For example, the E+Co CAREC fund addresses renewable energy only, while the Bulgaria Energy Efficiency fund focuses exclusively on energy efficiency.[37]

Some of the financing sources focus on sustainable management of forests and effective and sustained reduction of deforestation and forest degradation. Financing sources dedicated to forest management include the World Bank's Forest Investment Program and Forest Carbon Partnership Facility, and AfDB's Congo Basin Forest Fund and CLIM-DEV Africa Special Fund.

As in the case of geographic distribution, detailed information on the distribution of climate mitigation finance by technology/sector is not readily available. From the information compiled by the study cited earlier (Stockholm Environment Institute, 2009), clean energy (including renewable energy and energy efficiency) has the highest share (47%), with transport coming in second at 34%. Waste management is 4% and forestry and agriculture have very small shares. The remaining 13% is categorised as 'other', which is most likely clean energy related (see Figure 2.5).

Figure 2.5 Technology/sector distribution of financing for mitigation (Includes information from JICA, KfW, AfD and EIB)



Source: Stockholm Environment Institute, 2009.

37 Energy efficiency generally includes end-use renewable applications but excludes grid-connected renewable generation.

2.5.3 Funding sources

The majority of international public funding for climate change mitigation comes from governments of OECD countries. The multilateral development banks obtain their funds from various governments; the bilateral financial institutions are funded by their national governments. Most of the special funds for climate change mitigation and the carbon funds get their funding from the multilateral and bilateral sources. As mentioned earlier, while some non-OECD countries are now providing development financing to other less developed countries, almost all of the international climate change financing is provided by the OECD countries.

2.5.4 Financing objectives

Many multilateral and bilateral financing sources that provide financing for climate change mitigation, have broader developmental objectives. However, they are included in this guidebook because their basic objectives include providing financing for programmes or projects that reduce greenhouse gas (GHG) emissions and thereby contribute to climate change mitigation.

As shown above, the vast majority of the funding is devoted to energy related projects or programmes. The specific objectives of financing sources focusing on energy-related financing (which include MFIs, BFIs and special climate funds, excluding those addressing forestry) are generally stated by using one or a combination of the following:

1. Developing low-carbon strategies and deployment of low-carbon technologies
2. Facilitating increased investment in renewable energy resources
3. Facilitating and promoting investment in energy efficiency
4. Contributing to sustainable development
5. Integrating climate issues in development planning
6. Leveraging increased private investment in clean energy (renewable energy and energy efficiency).

The objectives of most carbon funds are to facilitate the sale of carbon credits by project developers. Some of the funds' objectives include providing up-front financing and/or assistance in project development through technical assistance or funding of the preparation of Project Information Notes (PIN) and Project Design Documents (PDD).

The objectives of the forestry focused financing sources generally include:

1. Sustainable management of forests
2. Effective and sustained reduction of deforestation and forest degradation
3. Reducing emissions from deforestation and forest degradation (REDD)
4. Leveraging of additional and sustained financial resources for REDD
5. Enhance forest carbon stocks.

2.5.5 Financing mechanisms

The primary financing mechanisms utilised by multilateral and bilateral financing sources for climate change mitigation are:

1. Grants
2. Concessional loans
3. Market-based loans
4. Credit lines
5. Credit or risk guarantees
6. Equity financing.

These mechanisms depend on the viability of the technology being deployed and the market barriers that need to be addressed.

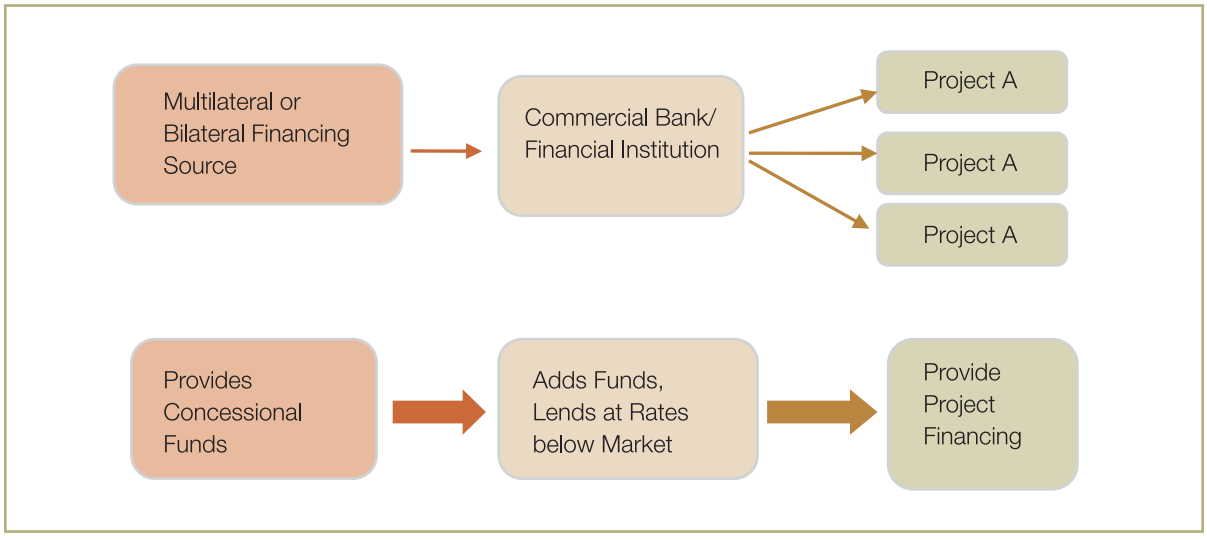
Climate change mitigation technologies may be classified in three broad categories:

1. Advanced climate-friendly technologies that are technically feasible but have high costs for deployment and have limited operational experience, thereby making them very difficult to finance commercially. Examples include concentrating solar collectors, offshore wind, and electric vehicles. The financing mechanisms most suitable for these technologies include grants and concessional financing.
2. Climate-friendly technologies that are proven and commercially available but cannot compete with existing technologies due to the lack of internalising of the externalities of climate impacts and therefore face barriers to commercial financing. Examples include solar photovoltaic, small hydropower and onshore wind energy. The financing mechanisms appropriate for these technologies include concessional financing and risk guarantees.
3. Climate-friendly technologies that are technically and economically viable but face various market and financing barriers that hinder large-scale implementation. The best example is energy efficiency. The financing mechanisms most appropriate for these technologies include market-based loans, concessional loans, credit lines and risk guarantees.[38]

Based on the above, it is not surprising that the largest amounts available for financing for mitigation are in the form of concessional loans. The financing sources often provide the concessional loans in collaboration with a commercial financial institution and leverage the available funds by requiring matching contributions. An illustrative example is shown in Figure 2.6. The financing source provides a concessional (low interest and long tenor) loan to a commercial financial institution (FI) with the condition that the FI add its own funds (generally at least on a 50-50 basis) and provide the combined funds at a concessional rate to the project developer.

38 It should be noted that this classification does not include RD&D funding for new technologies because it is unlikely that developing countries would seek such financing on a large scale.

Figure 2.6 Illustrative example – Concessional loan programme for mitigation projects



Source: Limaye, 2011.

Market-based loans are used when availability of funds (liquidity) is an issue but there is no need to subsidise the project with concessional financing. In such cases the financing provided by the MFI, BFI or climate fund overcomes the liquidity barrier. An example of this mechanism is the World Bank's China Energy Efficiency Financing (CHEEF) programme (World Bank, 2008).

Risk guarantees are an effective mechanism when the commercial financing sources have a perception of high risk with respect to the climate friendly technology. By providing a risk guarantee, the financing source reduces the risk perception and facilitates commercial financing. One of the best examples of this mechanism is the IFC's CEEF Program in Eastern Europe (Danish Management Group, 2010). After the success of CEEF, IFC has implemented similar programmes in China, Vietnam and the Philippines.

When the basic technology to be deployed is very expensive, grants may be used. However, generally the amount of grant funding available from financing sources is small and may be limited to small projects. The International Climate Initiative (ICI) and the Nordic Development Fund do provide grant funding for projects.

Equity financing is also not very common from multilateral or bilateral sources but there are a few sources of such financing. The GEEREF fund provided equity financing as does the Bulgarian Energy Efficiency Fund.

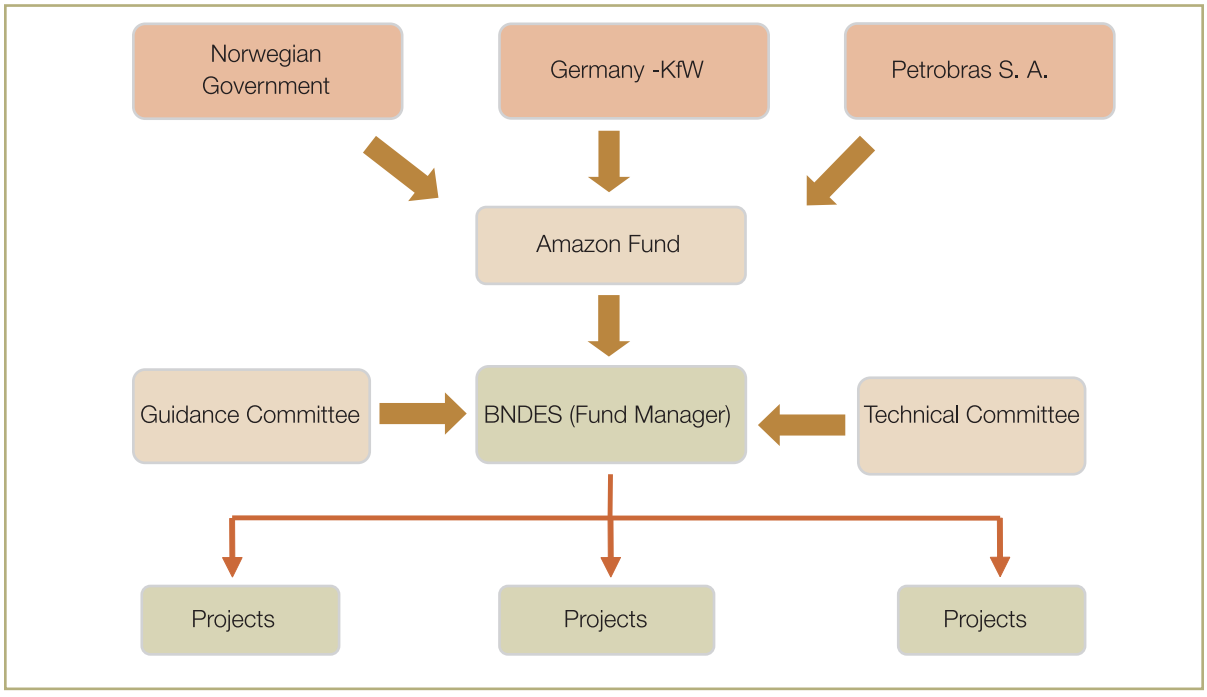
2.5.6 Management and governance

The management and governance of the financing sources is dependent on the type of funding sources. The MFIs (such as the World Bank, ADB, EBRD, etc.) are generally governed by a Board of Directors appointed by the countries that fund these MFIs. Within the MFIs, certain financing units are managed by internal groups with external advisors representing the funding sources for that group. For example the World Bank's Energy Sector Management Assistance Program (ESMAP) is managed by the World Bank's Sustainable Energy Group with several consultative groups and advisory boards for specific ESMAP programmes. ADB's Clean Energy Financing Partnership Facility is governed by a Steering Committee appointed by the ADB Board.

When special funds are created by the MFIs and/or BFIs, they establish an appropriate management and governance structure. This may include a Board or a Secretariat. In some cases the special funds are managed by a professional fund manager, such as the Brazilian Development Bank (BNDES) managing the Amazon Fund. Some special funds are run like independent legal entities and their managers are selected on a competitive basis. One example is the Bulgaria Energy Efficiency Fund (BgEFF), which has a 9-person Management Board responsible for the fund's overall strategic management and a hired Fund Manager responsible for the fund's daily operation and project implementation.

Figure 2.7 shows the organisation structure of the Amazon Fund.

Figure 2.7 Organisation structure of Amazon Fund



Source: BNDES Amazon Fund, http://www.amazonfund.gov.br/FundoAmazonia/fam/site_en

Most Carbon Funds are managed either by the Board of Directors (such as the ADB Asia Pacific Carbon Fund), by Special Boards, Committees or Trusts set up for fund management (such as for the World Bank Carbon Funds and Facility), or by professional fund managers (such as the EIB Post 2012 Carbon Credit Fund that is managed by Conning Asset Management (Europe) Limited, as investment manager).

The BFIs are usually an arm of a national government, and the management and governance is either directly under the relevant government Ministry or a Board of Directors is appointed by the government to oversee the operations of the BFI. Table 2.10 illustrates some of the management and governance structures of multilateral and bilateral financing sources.

Table 2.10 Management and governance structures of selected multilateral and bilateral financing sources

Financing source	Management and governance
Multilateral sources	
The World Bank Group	Board of Directors appointed by funding countries
World Bank - ESMAP	Bank's Sustainable Energy Groups with various consultative groups and advisory boards
Asian Development Bank	Board of Directors appointed by funding countries
ADB Clean Energy Financing Partnership Facility	ADB's Climate Change Steering Committee
European Bank for Reconstruction and Development (EBRD)	Board of Directors appointed by funding countries
Special climate funds	
ADB Climate Change Fund	Fund Manager appointed by ADB's Clean Energy Working Group
AfDB Congo Basin Forest Fund	Governing Council appointed by AfDB
BNDES Amazon Fund	BNDES Bank
Bulgaria Energy Efficiency Fund	Fund Manager appointed by funding organisations
Clean Technology Fund	CTF Trust Fund Committee, an MDB Committee, a Partnership Forum, an Administrative Unit & Trustee
Special Climate Change Fund	GEF Governing Council
Carbon funds	
ADB Asia Pacific Carbon Fund	ADB Board of Directors
World Bank Carbon Funds and Facility	WB Carbon Finance Unit
EIB Post 2012 Carbon Credit Fund	Conning Asset Management (Europe) Limited, investment manager
Bilateral financing sources	
AfD	Board of Directors - 16 members including 6 government Ministries appointed by funding countries
KfW	Executive Board appointed by the German Government
AusAid	Autonomous agency reporting to the Ministry of Foreign Affairs and Trade
DANIDA	Danish Ministry of Foreign Affairs

Financing source	Management and governance
International Climate Fund	Management Team appointed by U.K. Dept of International Development and Dept. for Environment and Climate Change
JICA	Board of Directors appointed by the Japanese Government

Source: Compiled by the authors of this guidebook

2.6 Requirements of financing sources

This section presents an overview of some of the requirements of the multilateral and bilateral financing sources. The topics addressed below are:

1. Qualifying projects/programmes
2. Eligibility conditions
3. Project/programme evaluation criteria
4. Guidelines and procedures for fund disbursement
5. Measurement, reporting and verification procedures

2.6.1 Qualifying projects/programmes

Most of the multilateral and bilateral financing sources will accept funding applications for projects or programmes that are consistent with their objectives. Typical objectives were reviewed in section 2.5.3 above. For most MFIs and BFIs, the qualifying programmes and projects are determined by negotiations between the applicant country and the financing source.

When special funds are established for climate change mitigation, these funds specify the qualifying programmes and projects in broad categories. These may be expressed in the terms of the technologies or sector that the fund focuses on (such as the list provided above in section 2.5.2).

Many of the special funds consider a wide range of activities encompassing renewable energy, energy efficiency, and other climate change mitigation projects as qualifying activities. However, some special funds have a narrower focus. For example, the Mediterranean Investment Facility addresses renewable energy projects, while the Bulgarian Energy Efficiency Fund focuses exclusively on energy efficiency. The BNDES Amazon Fund and the AfDB Congo Basin Forest Fund limit their funding support only for forestry related projects.

2.6.2 Eligibility conditions

There is a wide range of eligibility conditions. The eligibility conditions may cover one or more of the following areas:

1. Geographic or regional setting
2. Technology/sector covered
3. Type of financing (grant, concessional or market-based loan, guarantee, equity finance, etc.)
4. Size of project (minimum and maximum)
5. Size of the targeted organisation(s)
6. Co-financing or cost-sharing requirements
7. Type of proposing entity (government agency, NGO, PPP, private sector, etc.)
8. Implementation time frame.

2.6.3 Project/programme evaluation criteria

The financing sources define the criteria to be utilised for evaluating the eligibility and suitability of the project for financing. Such criteria may include the above items defined under eligibility criteria plus additional items such as:

1. Relevance to objectives of the financing source
2. Relevance to objectives of the funding agencies (who have established the financing source)
3. Total funding sought
4. Amount or % of co-financing
5. Estimated GHG reductions
6. Cost of achieving the reductions (such as US$ per ton of CO_2 emission reduction)[39]
7. Economic and financial viability
8. Experience and capabilities of proposing entity
9. Programme management plan
10. Implementation plan
11. Evaluation plan.

These types of evaluation requirements are specified by the financing sources and should be carefully examined before preparing proposals for financing.

2.6.4 Guidelines and procedures for fund disbursement

The procedures for fund disbursement may vary, depending on the requirements of the financing source.

39 Typically, the range is between 1,000 to 2,500 tons of CO_2 emission reduction per year per million dollars of initial investment.

In many MFI and BFI financings, the applicant country and the financing source negotiate the fund disbursement procedures for each specific project.

Many of the special funds managed by the MFIs and BFIs use a competitive bidding approach for selecting projects for financing. In such cases the financing source will invite proposals from qualified organisations for eligible projects and will specify the proposal requirements, eligibility criteria, and evaluation procedures and criteria.

2.6.5 Measurement, reporting and verification procedures

All financing sources will specify the reporting requirements for each programme or project. Generally these will include:

1. Periodic progress reports (generally quarterly)
2. Mid-term evaluation report
3. Specific reports on individual projects (when a programme consists of many projects)
4. Final Project Report or Programme Report
5. Evaluation Report.

In terms of measurement, reporting and verification (MRV), all multilateral and bilateral financing sources require a post-implementation evaluation report. Most MFIs and BFIs either conduct the evaluation using their own staff or engage independent consultants to conduct the evaluations. However, there is a need to improve and standardise the MRV procedures used for mitigation actions. The limitations of the current practice include inconsistent and/or incomplete self reporting of financial support; infrequent reporting; limited and incomplete information on multilateral development banks and other non-UNFCCC funds; lack of primary data on financial flows and limited verification procedures (OECD/IEA, 2009).

Some of the financing sources have formal tools for monitoring and evaluation. For example:

1. JICA has developed the Climate Finance Impact Tool for Mitigation projects (JICA, 2011).
2. KfW is implementing Climate Check, a tool it had developed in cooperation with GIZ and BMZ, to factor climate issues and emission reductions into investment decisions and to evaluate the project results.[40]
3. AfD measures emission savings and cost of emission reductions using its AfD Carbon Footprint Tool.[41]
4. While the use of such tools is not yet mandatory, it is likely that these types of tools will be very helpful in standardising the monitoring and evaluation process.

40 GTZ, Climate Check Tool, http://www.gtz.de/climate-check

41 AfD, Carbon Footprint Tool, http://www.afd.fr/lang/en/home/projets_afd/AFD-et-environnement/changement_climatique/Liens_utiles_climat/8461873687

3. International Private Financing Sources for Mitigation Actions

3.1 Overview of private financing

3.1.1 Introduction

This section reviews the range of international private financing that may be available for climate change mitigation in developing countries, explores the key issues and considerations in scaling up private financing, and presents examples of a number of private financing sources that are becoming increasingly engaged in financing climate change mitigation projects. As indicated in Section 1, private finance has been a major contributor to climate change mitigation financing (Climate Policy Initiative, 2011), contributing 59% or about US$55 billion of financing in 2009-2010. Most of this private financing has been in the form of project debt financing, particularly of renewable energy projects, which have experienced substantial growth in the last several years.

The Climate Policy Initiative study noted that "there is no agreement on what exactly counts as private climate finance, given that profit-making is the main objective and outcome of private sector activity and capital flows. However, key outcomes and objectives can also include greenhouse mitigation and climate adaptation, and capital flows to activities with such outcomes should be counted as climate finance. This includes, for instance, investment in renewable energy, energy efficiency, and sustainable forestry or agriculture on the mitigation side. An important component to private climate finance is the flows which are leveraged by the public sector" (Climate Policy Initiative, 2011).

The information on the amount of private financing was compiled using data on foreign direct investment (FDI) defined as investments made by a resident entity in one economy (the direct investor) with the objective of establishing a long term interest in an enterprise (the direct investment enterprise) located in another economy (UNCTAD, 2010). FDI represents the biggest source of financing across private and public sources, and can play an important role in addressing climate change by favouring the transfer of environmentally-friendly technologies and know-how.

Private sector investments in mitigation activities will include equity and debt financing of large mitigation projects (such as a wind farm or a solar PV generation facility) and smaller individual projects (such as energy efficiency projects in SMEs or solar water heaters in homes or hotels).

Many public sector initiatives, by national governments, multilateral and bilateral financial institutions, and special climate or carbon funds, are designed to foster and promote increased foreign private investment in climate change mitigation. It should be noted that the private sector approaches climate change investments in the same manner as any other investments. However, climate change mitigation projects have certain unique characteristics that require an additional level of understanding and analysis. These include the influence of policies and regulations on the viability of an investment, such as the legal basis and durability of any subsidies, grants, tax credits, or other mechanisms that the public sector has employed to encourage investments by the private sector. Also specific public sector financing programmes that support

climate change mitigation projects with initiatives such as concessional financing or risk guarantees can increase the economic and financial attractiveness of the investments, thereby providing an incentive for private sector investment in such projects.

3.1.2 Risk vs. Return considerations

At the heart of every private investment decision is the basic consideration of the risk of the investment against the potential return from the investment. At the individual project level, investors are mainly motivated by the profitability of the potential investment, which is determined by whether the investment (either debt or equity) offers the right risk-reward ratios. The private sector is influenced in the risk-reward assessment by the underlying national and international policy and regulatory framework that will determine the value of the investment.

The major risks considered by the private sector in investments in climate change mitigation projects have been summarised as follows (ODI, 2011d):

1. Technology risk – reflecting concern that a new and relatively untried technology or system may not work as expected.

2. General political risk – reflecting concern about political stability and the security of property rights in the country; along with the generally higher cost of working within unfamiliar legal systems.

3. Currency risk – reflecting concern about the loss of value of local currencies (and their lower utility to an overseas investor).

4. Regulatory and policy risk – reflecting concern about the stability and certainty of the regulatory and policy environment, including the longevity of incentives available for low carbon investment and the reliability of power purchase agreements.

5. Execution risk – reflecting concern that the local project developer/firm may lack the capacity and/or experience to execute the project efficiently; along with the general difficulty of operating in a distant and unfamiliar country.

6. Unfamiliarity risk – reflecting the amount of time and effort it takes to understand a project of a kind that has not been undertaken by the investor before.

Public sector initiatives are designed to eliminate one or more of these risks or to increase private investment returns. For example, the introduction of a carbon tax can increase the return of projects using low-carbon technologies and decrease the return of energy production with high CO_2 emissions per unit of energy output. Regulatory initiatives such as a feed-in tariff combined with the facilitation of long-term power purchase agreements (PPAs) for renewable energy, can substantially enhance the attractiveness of investments in solar or wind energy projects by improving the level, predictability and sustainability of the cash flows from the investment. Therefore, any focus on leveraging private sector finance needs to pay attention to the balance of the private sector's assets and liabilities, and the underlying policies and regulations by which they are determined.

3.1.3 Types of private sector financing

Before considering private financing of climate change mitigation projects, it is useful to review the different types of private financing. A developer of a climate change mitigation project (for example, a grid-connected renewable energy installation) can seek two types of private financing: debt and equity. Debt financing is

generally provided by banks or financial institutions (FIs). Equity financing, which may be in return for an ownership stake in the project or in the company implementing the project, may be provided by private investors (there may also be some equity investment available from banks/FIs and from public sector funds).

3.1.4 Debt financing

Debt financing is considered less risky than equity financing, since in the case of 'failure' of the project or insolvency of the project developer, the debt providers rank ahead of equity financiers in terms of receiving any available funds. Debt financing is therefore less expensive (in terms of interest costs) than equity financing. Equity providers consider their investments more risky and some such providers (such as venture capital funds) require high returns on their investments.

The types of debt financing from banks and financial institutions are illustrated in Box 3.1.

Box 3.1 Typical debt financing

Corporate Lending: Banks provide finance to companies to support everyday operations. An assessment is made of the company's financial strength and stability, and debt is priced accordingly. These bank facilities place few restrictions on how the company can use the funds, provided certain general conditions are met.

Project Finance, or Limited Recourse Finance: Debt is borrowed for a specific project and the amount of debt made available will be linked to the revenue the project will generate over a period of time, as this is the means to pay back the debt. This amount is then adjusted to reflect inherent risks, e.g. the production and sale of power. In the case of a problem with loan repayment, rather like a typical mortgage, the banks will establish first 'charge' or claim over the assets of a business, as described above. The first tranche of debt to get repaid from the project is usually called 'senior debt'.

Mezzanine Finance: As its name implies, this type of lending sits between the top level of senior bank debt and the equity ownership of a project or company. Mezzanine loans take more risk than senior debt because regular repayments of the mezzanine loan are made after those for senior debt, however, the risk is less than equity ownership in the company. Mezzanine loans are usually of shorter duration and more expensive for borrowers, but pays a greater return to the lender (mezzanine debt may be provided by a bank or other financial institution). A renewable energy project may seek mezzanine finance if the amount of bank debt it can access is insufficient: the mezzanine loan may be a cheaper way of replacing some of the additional equity that would be needed in that situation, and therefore can improve the cost of overall finance (and thus the rate of return for owners).

Refinancing: this is the case when a project or a business has already borrowed money but decides, or needs, to replace existing debt arrangements with new ones, similar to refinancing a mortgage. Reasons for refinancing include: more attractive terms becoming available in the market (perhaps as lenders become more familiar with the technology, meaning more money can be borrowed against the asset); or the duration of the loan facility, e.g. loans are often structured to become more expensive over time because of the increasing risk of changes to regulation or market conditions. One of the results of the financial crisis was that banks became extremely reluctant to lend for more than 6 or 7 years, which 'forced' projects that required longer-term loans, to refinance in the future, and take the risk of the terms available at that time.

Source: UNEP, 2009b.

3.1.5 Equity financing

Equity financing sources may include individual private investors, venture capital funds, private equity funds, pension funds and other funds such as infrastructure funds. Such investors may provide equity financing for individual projects or to the company (project developer) implementing the project. Depending on the type of business, the stage of development of the technology, and degree of risk associated, different types of equity investors will engage in different ways. For example:

1. Private entrepreneurs local to areas with strong renewable energy potential often engage in the more risky early development of the projects
2. Venture Capital providers will focus on 'early stage' or 'growth stage' (depending on how far from the laboratory and commercial roll out) technology companies
3. Private Equity Firms, which focus on later stage and more mature technologies or projects, and generally expect to 'exit' their investment and make their returns in a 3 to 5 year timeframe
4. Infrastructure Funds, traditionally interested in lower risk infrastructure such as roads, rail, grid and waste facilities, which have a longer term investment horizon and so expect lower returns over this period
5. Institutional Investors such as Pension Funds have an even longer time horizon and larger amounts of money to invest, with lower risk appetite.

Most equity investors will use the Internal Rate of Return (IRR) of each project as the yardstick for reaching investment decisions. IRR is used to measure and compare the profitability of investments. Equity providers will generally have an expectation of the minimum IRR they need to achieve, known as a hurdle rate. The IRR can be considered to be equivalent to the earnings in the form of an annual rate of interest from an investment.

Table 3.1 illustrates the typical risk-return requirements of private financing sources.

Table 3.1 Risk/return profiles of private financing sources

Venture capital	Private equity	Infrastructure funds	Pension funds	Bank mezzanine debt	Bank senior debt
Start-ups, new technology, prototypes	Pre-IPO* companies, demonstrator technology	Proven technology, private companies	Proven technology	Demonstrator/ proven technology, new companies	Proven technology, established companies
>50% International Rate of Return (IRR)	IRR>35%	15%> IRR	IRR >15%	LIBOR* + 700 bps	LIBOR + 300 bps

Source: UNDP, 2011.

3.2 Debt financing from banks and financial institutions

The most common and the largest source of financing for mitigation projects is debt financing from banks and financial institutions (FIs). Many of these banks/FIs are local organisations that provide debt financing to project developers. There are literally hundreds or thousands of such banks/FIs and it would not be useful to try to list them. However, it is useful to consider some international banks/FIs that have made major commitments to financing climate change mitigation projects. When multinational companies invest in developing country projects, such as renewable energy, foreign banks often follow their customers and provide debt financing services. As they are familiar with the companies and their products from their home countries, they are willing to provide lending support to the climate change mitigation projects implemented by their long-term clients or for projects using equipment sold by their long-term clients.

Some of the most prominent banks are listed below. All of these banks have strong environmental or climate change policies and the majority have existing lending programmes for renewable energy, led by the European banks that have substantial project financing activity in this area (UNEP, 2009a).

1. **Fortis Bank –** made a commitment to the environment at the highest corporate level. The bank had an Environmental Board that reported to the main Board and developed a carbon neutral strategy for its own emissions, including energy saving and use of renewable energy. Due to problems during the financial crisis Fortis bank was taken over by BNP Paribas, which has continued the commitment to sustainable energy finance[42] that includes a portfolio of RE loans in the region of €500 million.

2. **Mizuho Bank –** established a Sustainable Development Division within the Global Structured Finance Division, mainly for project finance and financial advisory business. Mizuho is a signatory of the Equator Principles and is active with the Climate Group in the development of 'Climate Principles'. The main investment focus is renewable energy. The Bank has launched loan products, such as Mizuho Eco–assist and Mizuho Eco Private Placement to provide support from a financial perspective for SME clients who are proactively engaged in environmental programmes.[43] While most of the financing using these products has been in developed countries, the Bank has indicated its interest in financing projects in developing countries.

3. **Nedbank –** has a Board level Climate Change position statement which includes the carbon management programme, and commitment to developing innovative financing for clean energy. Nedbank has established specific energy intensity, carbon, and water reduction targets for the bank. It also has a cross-Departmental Environment Forum. Nedbank has signed a National Energy Efficiency Accord with the South African government and is pursuing various carbon finance and CDM activities, including energy efficiency projects. A major financing programme is for residential solar water heaters.[44]

4. **Yes Bank –** is setting up South Asia Clean Energy Fund (SACEF) in collaboration with Global Environment Fund – a US Private Equity firm; and equity contribution from ADB. SACEF is a US$200 million fund targeting investments in clean energy, clean technology and energy efficiency across India, Sri Lanka, Nepal, and Bangladesh. SACEF is focused on off-balance sheet, limited or non-recourse financing. [45]

42 BNP Paribas, http://www.bnpparibas.com/en/sustainable-development-links-and-resources
43 Mizhuo Bank, http://www.mizuho-fg.co.jp/english/csr/environment/business/financing.html
44 Nedbank, http://www.nedbank.co.za/website/content/nedbank_solar/Useful-Links.aspx
45 YES Bank India, http://www.yesbank.in/index.jsp?navigationUrl=%2FYES+Bank+Repository%2Fen

5. **Deutsche Bank –** has made a major corporate commitment to climate change mitigation financing. The Bank is active in financing RE projects in both developed and developing countries, and has established the Deutsche Bank Climate Advisors Group which has launched the Global Energy Transfer Feed-in Tariffs (GET FiT) programme as a public-private partnership aimed at scaling up renewable energy in developing countries through the development and implementation of FiT laws and policies. Also, the Bank is a partner in the European Energy Efficiency Fund (EEEF), to improve risk/return profiles of clean energy investment through dedicated funds via partner financial institutions (PFIs) and direct project sponsors". For smaller, indirect investments, the EEEF only uses debt instruments – mostly senior debt or guarantees – backed by carefully selected PFIs with a loan tenor up to fifteen years (Deutsche Bank, 2011).

6. **Banco Santander –** The Spanish bank Banco Santander has been very active in project financing of clean energy projects and was recently named by Bloomberg New Energy Finance as the world's "greenest" bank.[46] Much of their lending activity has been in developed countries.

7. **Banco Bibao Vizcaya –** this Spanish bank is also very active in project financing of renewable energy projects and was mentioned by Bloomberg as the leading bank in renewable energy project finance. Their lending is also primarily in developed countries.

3.3 Private financing sources for mitigation finance

3.3.1 Introduction

There has been increasing interest on the part of many private financing sources, including private equity funds, venture funds and pension funds in providing financing for climate change mitigation. Information on many of such financing sources is not readily available. The research conducted in this project led to the identification of 16 private financing sources listed in Appendix I.

These financing sources represent the following types:

1. Special funds created to mobilise and/or leverage private capital for mitigation finance, such as the Africa Enterprise Challenge Fund, Capital Market Climate Initiative, and Institutional Investors Group on Climate Change.

2. Funds established by venture capital and private equity sources to target profitable investments related to climate change, including the China Environment Fund, FE Clean Energy Fund, MMA renewable Ventures, and NEFCO Nordic Climate Facility.

3. Pension Funds, such as the ATP fund in Denmark

4. Other specialised sources such as Investors Group on Climate Change, the P8 group and X-Prize.

Table 3.2 provides a summary of these funds. Brief descriptions are provided below.

46 http://www.bloomberg.com/pressroom/2011/04/05/banco-santander-tops-bloomberg-markets-magazine-s-greenest-banks-2/index.html

Table 3.2 Summary of selected private financing sources

Financing source	Total fund size	Major objectives/activities
Africa Enterprise Challenge Fund: Renewable Energy & Adaptation to Climate Technologies	N/A	Co-funding of private investments for low cost, clean energy for rural businesses and households
ATP Pension Fund	€66 billion	Investments in renewable energy infrastructure and technology
Capital Market Climate Initiative (CMCI)	N/A	Help unlock the private sector's ability to help meet the $100 billion of new green investment required annually by 2020 to tackle climate change
FE Clean Energy Group Inc.	N/A	Investments in the middle market energy efficiency services sector and in sustainable development.
Institutional Investors Group on Climate Change (IIGCC)	€6 trillion	Catalyse greater investment in a low carbon economy
Investor Network on Climate Risk (managed by Ceres)	US$10 trillion	Identify opportunities and risks in climate change and tackle related policy and governance issues
Investor Group on Climate Change Australia/New Zealand (IGCC)	AU$700 billion	Encourage government policies and investment practices that address the risks and opportunities of climate change
Long-term Investors Club	US$3 trillion	Bring together major worldwide private financial institutions to fund climate mitigation projects
MMA Renewable Ventures (MMARV)	US$500 million	Deliver exceptional investment opportunities while providing competitively priced renewable energy and energy efficiency products
P8 Group	US$3 trillion	Create viable investment vehicles to combat climate change and promote sustainable development
X prize – Energy and Environment Prize Group	N/A	Generate breakthroughs in clean energy, climate change, energy distribution/storage, energy efficiency/use, and water resource management

Note – While some of these financing sources may not directly invest in developing countries, they provide financing to developed country firms investing in developing countries' projects that address mitigation. Source: Compiled by the authors of this guidebook.

These private financing sources present a very interesting, although not exhaustive, set of different funding sources, financing objectives and organisational structures.

3.3.2 Special private sector funds

Africa Enterprise Challenge Fund

The Africa Enterprise Challenge Fund (AECF) for Renewable Energy and Adaptation to Climate Technologies (REACT) is managed by the Alliance for a Green Revolution in Africa (AGRA). Its objective is to encourage private sector companies to compete for investment support for their new and innovative business ideas in the following countries of the East African Community (EAC): Burundi, Kenya, Rwanda, Tanzania and Uganda.

The AECF REACT will support private sector investment in the following:

1. Increased access to low cost, clean energy for rural businesses and households. This includes cost effective renewable power, commercially viable renewable fuels and other clean energy alternatives.
2. Products and services that help smallholder farmers adapt to climate change (for example, drought resistant seeds and technologies or weather early warning systems that increase resilience and reduce vulnerability).
3. Financial services that increase access to finance for low cost clean energy and climate resilient technologies or catalyse financial solutions such as weather insurance for smallholder farmers.

Funding from AECF is available to for-profit firms with business ideas implemented in the East African Community of Burundi, Kenya, Rwanda, Tanzania and Uganda. The funding is provided on a competitive basis in response to proposals submitted by private firms.

Capital Market Climate Initiative

The Capital Market Climate Initiative has been established by the U.K. Department of Energy and Climate Change. The Initiative aims to help unlock the private sector's ability to help meet new green investment required annually by 2020 to tackle climate change in developing countries.

The Initiative brings together experts from the financial and public sector to help deliver private climate financing at scale in developing countries by:

1. Identifying deliverable propositions to mobilise private capital
2. Developing a base of evidence for building developing country interest and support
3. Building private sector confidence in the feasibility of the task and opportunities.

The Initiative is developing a toolkit of strategies that can be used to mobilise private capital in developing countries. It is also currently supporting demonstration capital mobilisation projects in four developing countries.

The steering group and two working groups currently comprise key decision makers from the UK government, institutional investors, investment banks, insurance companies, stock exchanges, credit rating agency, Development Finance Institutions, think tanks and professional services.

Institutional Investors Group on Climate Change (IIGCC)

The Institutional Investors Group on Climate Change (IIGCC) has been established by the Climate Group and consists of a wide range of public and private organisations. One of the key objectives of the IIGCC is to catalyse greater investment in a low carbon economy by bringing investors together to use their collective influence with companies, policymakers and investors.

IIGCC focuses on cleaner and renewable energy, energy efficiency and decarbonisation. IIGCC membership is open to any institutional investor, including pension funds and asset managers, who align with the IIGCC's overall aim, i.e. to ensure that the risks and opportunities from climate change are addressed in investment practices and decisions and to engage with policymakers, companies and investors to accelerate the shift to a low carbon economy.

The IIGCC currently has over 70 members, including some of the largest pension funds and asset managers in Europe.

The IIGCC encourages:

1. Policymakers to provide policy frameworks that facilitate the move to a low carbon economy and are consistent with long-term investment objectives
2. Investors to take on a proactive approach on climate change through adapting their own investment activities and processes in order to enhance and preserve long-term investment values
3. Companies to standardise and improve disclosure on climate change and improve their performance.

3.3.3 Venture capital and private equity funds

FE Clean Energy Group, Inc.

The FE Clean Energy Group Inc. focuses on investments in the middle market energy efficiency services, renewable energy, and in return-driven sustainable development. Its geographic focus is on emerging markets in Asia, Central and Eastern Europe, and Latin America.

FE Clean Energy's portfolio includes private companies in Poland, Hungary, Mexico, China, India, Thailand, and Philippines in the following fields:

1. Small hydropower
2. Energy efficiency
3. Cogeneration
4. District heating
5. Street lighting
6. Biofuels
7. Waste to energy.

MMA renewable ventures

MMA Renewable Ventures is a U.S. based firm that coordinates the financing, installation, and operation of renewable energy systems and energy efficiency projects. The company's activities include:

1. Identifying qualified customers (minimum 250-300 kW system for solar, 3 MW for wind)
2. Performing site evaluations and initiating system approval processes
3. Sourcing and installing equipment
4. Providing finished, fully operational systems
5. Providing ongoing operations and maintenance services under contract.

MMA finances, owns and operates the energy efficiency assets on behalf of its customers. Payments are made on the savings made at an agreed rate. At the end of the contract, the customer can choose to renew the contract or buy the assets. While most of its US$500 million portfolio is in developed countries, the company is seeking opportunities to invest in developing countries and will finance companies in the U.S. that will make investments in renewable energy projects in developing countries.

3.3.4 Pension funds

Pension funds are becoming increasingly interested in financing climate change mitigation projects. Some of the pension funds active in this field include:

ATP pension fund

The ATP Pension Fund is Denmark's largest pension fund, and its investment department is responsible for managing assets worth more than DKK400 billion. Consistent with its philosophy and strategy of ensuring the highest pension benefits attainable while avoiding needless risks, it has now started investing in renewable energy infrastructure and technology, such as solar, wind and hydro, as well as emerging technologies, such as biofuels and biomass.

3.3.5 Other private sector financing sources

Investor Network on Climate Risk

The Investor Network on Climate Risk (INCR) is a group of U.S. based investors that identify opportunities and risks in climate change. INCR tackles the policy and governance issues that impede investor progress towards more sustainable capital markets.

INCR has supported company dialogues on investor concerns ranging from sustainable homebuilding practices to disposal of coal ash. INCR also engages in industry groups such as electric power, insurance, oil and gas, real estate, transportation and water.

INCR also works with federal and state policymakers to strengthen regional and national legislation that would reduce carbon emissions and other pollution, protect water supplies and ecosystems and unlock financing for low-carbon energy sources and technologies like wind, solar and biofuels.

Investors Group on Climate Change (IGCC)

The Investors Group on Climate Change is an Australia and New Zealand based organisation that aims to encourage government policies and investment practices that address the risks and opportunities of climate change, for the ultimate benefit of superannuants and unit holders. In 2011, the members of IGCC managed around 700 billion Australian dollars of funds. The objectives of IGCC are to:

1. Raise awareness of the potential impacts resulting from climate change to the investment industry, corporate, government and community sectors.
2. Encourage best practice approaches to facilitate the inclusion of the impacts of climate change in investment analysis by the investment industry.
3. Provide information to assist the investment industry to understand and incorporate climate change into the investment decision.

Long-Term Investors Club

The Long-Term Investors Club aims to bring together major worldwide institutions including sovereign wealth funds, public sector retirement funds, private sector pension funds, economists, financial policy makers, and regulators to assert their common identity as long-term investors. They aim to open the way to greater cooperation and seek to deliver the message that fostering the right conditions for long-term investment will be an important element in promoting sustainable growth and economic stability.

The club is now focusing on investments in improved transportation infrastructure, climate change, energy efficiency, renewable energy and urban development.

P8 group

The P8 Group involves ten leading global pension funds and sovereign wealth funds, including representatives from Europe, Asia, Australasia and North America. The Group represents over US$3 trillion of investment capital and because they are pension funds, they have an inherently long-term focus. P8 brings together senior leaders from some of the world's largest public pension funds to develop actions relating to global issues and particularly climate change. P8 is an initiative of the Cambridge Programme for Sustainability Leadership (CPSL) and The Prince of Wales's Business & the Environment Programme (BEP), supported by the Environmental Capital Group (ECG) and the Nand & Jeet Khemka Foundation, to create viable investment vehicles to combat climate change and promote sustainable development.

The P8 Group Summits have played a key role in getting pension funds to lead the move towards climate change action. Participants agreed to continue working together to address climate change, both within their organisations and as a group to influence policy and markets. The aim of the members of the P8 Group is to build on their existing activities in the area of climate change by bringing together global representation from the sector to help to catalyse opportunities for further investment and to support the removal of barriers to large-scale capital deployment. By focusing on developing opportunities for investments into climate solutions, the P8 aim to develop a momentum in the capital markets towards these investments.

X-Prize – Energy and environment prize group

The X-Prize Foundation is an educational non-profit organisation whose mission is to bring about radical breakthroughs for the benefit of humanity. They aim to inspire new industries and the revitalisation of markets that are currently stuck due to existing failures or a belief that a solution is not possible. The Foundation addresses some of the world's grand challenges by creating and managing large-scale, high-profile competitions that stimulate investment in research and development that are worth far more than the prize that is offered. It motivates and inspires brilliant innovators from all disciplines to leverage their intellectual and financial capital.

One of the X-Prizes is in the Energy & Environment Prize Group where the goal is to generate breakthroughs in clean energy, climate change, energy distribution/storage, energy efficiency/use, and water resource management. Advances in these fields will lead to greater sustainability and efficiency, while reducing dependence on fossil fuels.

The Group has completed a US$10 million automotive prize competition to develop a new generation of viable, safe, affordable and super fuel efficient vehicles, and a US$1.4 million prize for oil clean-up. Future prize competitions are likely to include areas such as carbon utilisation, aviation battery, energy awareness, home energy storage, featherweight solar and wind, race to zero CO_2, and residential waste to energy.

3.4 Private sector carbon finance

Increased activity in emissions trading and carbon markets over the last several years has led to private sector organisations providing financing by purchasing carbon credits. An illustrative list of such organisations is provided below:

Asia Carbon Group and the Asian Carbon Exchange

The primary objective of Asia Carbon Group is to mitigate global climate change and initiate sustainable development through the application of the Kyoto Protocol financial mechanisms, in particular the Clean Development Mechanism (CDM), Joint Implementation (JI) and emissions trading. In addition to carbon financing, the Group is now establishing a trading platform - the Asia Carbon Exchange - and also the Asia Carbon Fund for the purposes of investing in sustainable development projects globally. It is further planning to launch an exchange in Japan that will enable utilities to gain better access to carbon reduction projects.

Carbon Credit Capital

Carbon Credit Capital LLC, a renewable energy financial services and project development company, uses carbon finance to catalyse greenhouse gas reduction projects. It focuses on the investment in carbon-credit-generating renewable energy projects, as well as involves in developing sustainable carbon credits and managing risk. The company partners with project developers to facilitate offset creation and sells offsets to large emitters, banks, and other interested buyers. Its projects include municipal, forestry, livestock, bioenergy, renewable energy, and microcredit. The company serves developers and buyers in Europe, the United States, and India.

C-Quest Capital

C-Quest Capital (CQC) is a carbon finance business dedicated to creating and developing high-quality emission reduction projects around the world. The company invests in carbon assets that generate superior returns and concrete benefits to the environment. CQC is headquartered in Washington, D.C. with offices in Australia and Malaysia and a presence in India.

CQC aims to use its competency in environmental markets and finance to accelerate the global transition to a low-carbon economy and foster sustainable development. The company brings technical expertise to the investments and maintains high standards of integrity to ensure that the projects make real contributions to reducing greenhouse gas emissions.

ICECAP Ltd.

ICECAP is a private sector provider of emissions credits from developing world CDM & JI projects in the emissions trading markets. In March 2004, the ICECAP Carbon Portfolio was launched, one of the world's first private sector carbon hedging vehicles. This reached first closing on 17th January 2006 with aggregate commitments of 15 million tonnes. In addition, ICECAP has developed a track record in Certified Emissions Reduction transactions through its trading business.

Sindicatum sustainable resources

Sindicatum Sustainable Resources (formerly Sindicatum Carbon Capital) is a global sustainable resources company headquartered in Singapore. Sindicatum is an operator of clean energy projects worldwide and producer of sustainable resources from the use of natural products and waste. Sindicatum was founded in 2005 and its key strategic shareholders include Citigroup Venture Capital International, American International Group (through its member company AIG Global Investment Group), Black River Asset Management, and Gulf One Bank BSC.

Sindicatum moved its headquarters from London to Singapore in 2009 to be closer to its assets, most of which are in Asia. Sindicatum uses its own expertise and capital to develop climate change mitigation projects from conception through to implementation and long-term operation. It works in partnership with companies and governments to deliver cost effective means by which to reduce greenhouse gas emissions. Areas of specialisation include abating greenhouse gas emissions from the waste management and natural resource sectors, as well as biomass and energy efficiency applications.

4. Public-Private Partnerships for Financing Mitigation Actions

4.1 Public-private partnerships

The large investments required to meet climate change mitigation goals need large-scale mobilisation of both public and private financing sources. There has been increased attention on developing appropriate public policies and initiatives that will leverage increased private investments in climate change mitigation financing. The concept of public-private partnerships (PPPs) has emerged as a promising delivery mechanism (World Bank, 2009).

Multilateral and bilateral financial institutions as well as national development banks have mobilised resources to global capital markets to support lending in developing countries. Partnerships with private donors have also helped raise concessional flows for lower income countries, and for global programmes. Fundraising through partnerships helps broaden the base of support for development among private sector actors. On the ground, PPPs enable governments in developing countries to leverage private flows to fill funding gaps, transfer service delivery risks, and improve the cost effectiveness of service delivery. They employ a range of financial instruments beyond loans and grants in leveraging private flows.

PPPs have been used in a number of other sectors. Generally, a PPP is a venture or service that is funded and operated through a partnership of government and one or more private-sector organisations. The concept of PPPs has been popular since the early 1990s, and there are many different PPP models (EIB, 2010). The range of structures used for PPPs varies. In some countries, the concept of a PPP equates only to a concession where the services provided under the concession are paid for by the public. In other countries, PPPs can include every type of outsourcing and joint venture between the public and private sectors.

A recent IEA study on energy efficiency governance pointed out the importance of engaging the private sector in implementing energy efficiency policy and programmes (which are key elements of climate change mitigation strategies). That study defined the concept of public-private partnerships as “voluntary efforts in which government and the private sector collaborate to analyse public policy problems and jointly implement solutions. Public-private partnerships work most effectively when they focus on a specific issue or problem (i.e. are programmatic), involve broad engagement with private-sector entities, and include some form of co-financing on technology or concept development or demonstration” (IEA, 2010).

4.2 PPPs for financing climate change mitigation

Climate change mitigation has become one of the highest priorities of governments. As a result, the public sector has become increasingly aware of the specific barriers related to development, financing and implementation of climate change mitigation projects. Mitigation technologies require substantial funding, particularly when they rely on new or emerging technologies, and the governments may not have the ability to invest and tie up large amounts of public funding for projects with long pay-back profiles. The partnering of the government with local financial institutions (LFIs) and other private financing sources enables the

structuring of PPPs to deliver market-oriented instruments that target specific market barriers, without the need for direct government subsidy programmes. PPPs can allow developing country governments to mobilise funding for their climate change mitigation programmes with only a fraction of the public funding that would otherwise be required, with the private sector taking on some of both the financial and performance risks.

A recent study conducted by the International Energy Agency focused on PPPs for financing energy efficiency programmes (IEA, 2011). In this study the characteristics of PPP were defined as follows:

1. A contractual relationship (or formal agreement) between a public entity and a private organisation
2. Allocation of risks between the public and private partners consistent with their willingness and ability to mitigate risks, in order to encourage the private partner to mobilise financing
3. Mobilisation of increased financing
4. Payments to the private sector for delivering services to the public sector.

4.3 PPPs in energy efficiency financing

The IEA study documented three types of PPPs for energy efficiency (EE) financing that are relevant for other types of climate change mitigation projects:

Dedicated Credit Lines: credit lines established by a public entity (such as a government agency and/or donor organisation) to enable financing of EE projects by a private sector organisation (bank or financial institution). Generally, the private sector bank or financial institution provides additional financing (co-financing) for the EE projects.

Risk-sharing Facilities: partial risk or partial credit guarantee programmes established by a public entity (such as a government agency and/or donor organisation) to reduce the risk of EE project financing to the private sector (by sharing the risk through a guarantee mechanism), thereby enabling increased private-sector lending to EE projects.

Energy Saving Performance Contracts (ESPCs): public sector initiatives, in the form of legislation or regulation, established by one or more government agencies to facilitate the implementation by ESCOs of energy performance-based contracts for improving EE in the public sector using private-sector financing.

Table 4.1 illustrates the characteristics of these three types of PPPs.

Table 4.1 Characteristics of PPPs for financing energy efficiency

Type of PPP	Brief Description	PPP Features			
		Agreement between Public and Private Entities	Allocation of Risk between Partners	Mobilisation of Private Sector Financing	Payment to Private Sector for Providing Services
Dedicated Credit Lines	Mechanism under which governments or donors provide low-interest loans to LFIs to encourage them to offer sub-loans to implementers of EE projects	Loan agreement between partners	Project financing risk shared between partners	Private partner generally provided co-financing	LFI earns fee by on-lending funds at higher interest
Risk-Sharing Facilities	Mechanism where governments or multilateral banks offer guarantee product to absorb some EE project risks and encourage involvement of LFIs in EE financing by reducing their risk	Guarantee Facility Agreement (GFA)	Public partner absorbs some financial risk	Mobilises additional private sector financing by risk reduction	LFI earns interest on additional loans mobilised
Energy Saving Performance Contracts (ESPCs)	ESCO enters into term agreement with public agency to provide services, with payments contingent on demonstrated performance	Energy services agreement (ESA)	Performance risk generally borne by ESCO	ESCOs mobilise private-sector financing	Performance-based payment to ESCO

Source: IEA, 2011.

The three types of PPPs for financing EE projects leverage private sector investment in different ways. The findings of the IEA study of PPPs in EE finance conclude the following:

1. **Dedicated credit lines** use government, international financial institutions (IFIs) or donor agency funds to leverage an increase in lending by local banks and financial institutions (referred to as

local financial institutions or LFIs) for EE projects. They address the issue of insufficient (or non-existent) lending to EE projects due to the lack of knowledge and understanding on the part of LFIs of the characteristics and benefits of such projects. By providing funds to these local financial institutions (generally at a low interest rate), the public partner provides an incentive for on-lending the funds for EE projects. Because the on-lending is at a higher interest rate than the interest on the funds provided by the government or IFI, the LFIs can make a profit on the loan transactions. The agreement between the public and private partners generally requires the LFI to co-finance the loans, thereby leveraging and increasing the amount of financing available (World Bank, 2008).

2. **Risk-sharing facilities** address the perception of LFIs that EE projects are more risky than their conventional lending. This perception prevents the LFIs from large-scale commercial financing of EE projects. Under the risk-sharing facility, the public agency provides a partial guarantee that covers a portion of the loss due to loan defaults. By sharing the risk, the public partner reduces the risk to the private sector LFI, thereby motivating the LFI to increase its lending to EE projects (Mostert, 2010).

   Both dedicated credit lines and risk-sharing facilities also include technical assistance and capacity building for the LFIs to increase their knowledge and understanding of EE projects, create greater interest on their part to increase lending to such projects, and help them identify and manage project risks and opportunities.

3. **ESPCs** address a number of barriers related to implementation of EE projects in the public sector. Under the ESPC concept, energy service companies (ESCOs) or other types of energy service providers provide a broad range of services, including providing or arranging commercial financing, to public agencies, industries, housing associations etc. under a performance-based agreement, in which guarantees are provided for the energy savings achieved. In the context of PPP we are concerned with ESPCs relating to implementation of EE in the public sector. Payments are made in the PPP case by the public agency to the ESCO only upon the satisfaction of the guarantees, thereby eliminating much of the technical and performance risk from the agency (Singh and Others, 2010).

4.4 Bonds and debt products

Since their inception, multilateral and national development banks have leveraged private funds on the world's financial markets to help finance country development efforts. Between 1995 and 2008, these development banks raised a total of US$1.35 trillion in proceeds on the capital markets, of which IBRD and IFC accounted for approximately US$235.4 billion. World Bank bonds and debt products, issued by IBRD, provide investors with the reassurance of an AAA credit rating, a wide choice of products, and strong secondary market performance for liquid World Bank benchmark bonds. Bonds are essentially instruments that raise funds from private sector investors to be used for financing various ventures – in this case mitigation projects in developing countries.

Some bilateral donors, such as Germany and France, have raised funds on their domestic capital markets, through their national development banks, to fund bilateral aid programmes. Both countries make substantial use of loans as part of their ODA. For instance, KfW has sought to "expand the scope of development cooperation by combining federal budget and capital market funds." In 2007 alone, contributions of KfW's bonds and own funds reached 20 per cent of Germany's ODA commitments in 2007.

These types of bonds and debt products are now increasingly being targeted for financing climate change mitigation projects. The proceeds from the World Bank Green Bonds provide some degree of earmarking

in order to demonstrate the linkage between resources mobilised and specific World Bank projects that support climate change mitigation and adaptation. World Bank Cool Bonds offer the additional benefit of paying a portion of its returns based on the fast-growing market for CERs in China and Malaysia.

Examples of some of these instruments are provided below:[47]

1. **World Bank Eco Notes** are six-year Euro (€)-denominated notes with a coupon of 3 per cent, plus a potential additional return linked to an ABN-Amro index of 'green' equities. The notes raised funds for IBRD at attractive rates, while raising awareness for funding 'green' activities, at the same time that the hedging activities of IBRD's swap counterparties also supported capital available to companies in the index. ABN-Amro and Fortis Bank distributed the notes in the Netherlands, Switzerland, and Belgium, primarily to retail investors. Proceeds were used in the general operations of IBRD.

2. **World Bank Cool Bonds** are five-year, US dollar-denominated notes paying a coupon of 3 per cent for an initial period, and a variable coupon amount for the remaining maturity of the note tied CERs generated by specified greenhouse gas (GHG) reducing projects in China and Malaysia. Hedging exposure to CERs by IBRD counterparties contributes to expansion of this market as well. Daiwa Securities and Mitsubishi Securities distributed the notes to Japanese investors. Proceeds were used in the general operations of IBRD.

World Bank Green Bonds are 6-year, Swedish kronor notes paying investors a 3.5 per cent annual interest rate and raising funds at a spread of 0.25 per cent over comparable maturity Swedish government paper. They enabled IBRD to raise funds at an attractive cost despite the challenging market environment. Skandinaviska Enskilda Banken (SEB) underwrote the issue and distributed mainly to Scandinavian institutional investors, who were attracted to the investment because the proceeds would be credited to a special account at IBRD that supports World Bank loan disbursements on qualifying climate change mitigation and adaptation projects.

4.5 Other examples of PPP

This guidebook has identified a number of other types of PPPs. Some of these PPPs have been established for the creation of special funds for climate change mitigation or for carbon funds while others have been established under private sector initiatives. Many of these have been discussed in previous Sections. Some examples are provided below:

4.5.1 Special funds for climate change mitigation

Examples of PPPs for establishment of special funds for climate change mitigation include the following:

1. The BNDES Amazon Fund is combining funds from NGOs and private investors along with funds from the Brazilian government and the Governments of Norway and Germany.

2. The Bulgaria Energy Efficiency Fund (BEEF) was established by the World Bank in cooperation with the GEF and the Austrian Government,[48] and utilised a private sector fund management team. BEEF also encouraged private FIs to participate in co-financing.

47 Extracted from World Bank, 2009.
48 Bulgaria was a World Bank client country at the time the BEEF was established.

3. The E+Co CAREC fund is a venture capital facility that is a unique partnership among a private organisation (E & Co.) and multilateral and bilateral financial institutions.

4. The Renewable Energy and Energy Efficiency Partnership (REEEP) comprises more than 350 partners including 45 governments as well as a range of private companies and international organisations.

5. The Global Energy Transfer Feed-in Tariffs (GET FiT) programme is a new PPP proposal that was promoted by Deutsche Bank Climate Change Advisors (DBCCA) in early 2010 to drive renewable energy investment in the developing world through the creation of new international PPPs. Recognising the success of FiTs to scale up renewable energy in industrial countries, GET FiT is a global partnership aimed at scaling up renewable energy in developing countries through the development and implementation of FiT laws and policies and leveraging debt and equity financing. It seeks to reduce investment risks for institutional equity investors and asset financiers.

4.5.2 Carbon funds

The following carbon funds have used the PPP concept:

1. EIB Post-2012 Carbon Credit Fund is a partnership between the European Investment Bank, Conning Asset Management (Europe) Limited, its investment manager, and First Climate, its investment advisor.

2. The Multilateral Carbon Credit Fund represents a partnership among the multilaterals EIB and EBRD, EBRD member states, sovereign participants including the Governments of Finland, Belgium (Flanders), Ireland, Luxembourg, Spain and Sweden, and private participants CEZ (Czech Republic), Endesa (Spain), Gas Natural (Spain), PPC (Greece), Union Fenosa (Spain) and Zeroemissions (Spain).

3. The World Bank Carbon Partnership Facility includes the Governments of Spain, Norway and Sweden, and the private organisations Endesa SA and E.ON Carbon Sourcing North America LLC.

4.5.3 Private sector funds

Some of the private sector-focused funds get a portion of their core funding from MFIs and/or BFIs and leverage this with private funds to provide financing for private sector projects.[49] Examples include:

1. The Africa Enterprise Challenge Fund is operated privately and focuses exclusively on financing private sector projects but gets some of its funding from donors (including the Swedish International Development Agency).

2. The Capital Market Climate Initiative (CMCI) was launched by the U.K. Department of Energy and Climate Change and partners with private investors to mobilise private sector capital to help meet the new green investment requirements to tackle climate change in developing countries.

3. The Institutional Investors Group on Climate Change (IIGCC) represents a unique PPP organised by The Climate Group to catalyse greater investment in a low carbon economy.

4. The Long-Term Investors Club is a partnership among the Caisse des Dépots, a French investment group, and three European public financial institutions – Cassa Depositi e Prestiti, KfW Bankengruppe, and the European Investment Bank.

49 These funds are treated as PPPs because the funding is from public agencies but the operations are managed by private organisations.

5. The NEFCO Environment Fund has been established by the governments of Nordic countries and operated by a private entity to leverage private investments in climate change related projects.

Table 4.2 summarises these PPPs.

Table 4.2 Examples of public-private partnerships

Public-private partnership	Public partners	Private partners
Special funds for climate change mitigation		
BNDES Amazon Fund	Governments of Brazil, Norway and Germany	Private investors from Brazil and other countries
Bulgaria Energy Efficiency Fund	World Bank, GEF and Austrian Government	Private sector fund management consortium and local financial institutions in Bulgaria
E&Co. CAREC Fund	Various multilateral and bilateral financial institutions	E & Co.
Renewable Energy and Energy Efficiency Partnership (REEEP)	45 government and international organisations	Large number of private organisations
Carbon funds		
EIB Post-2012 Carbon Credit Fund	European Investment Bank	Conning Asset Management (Europe) Limited
Multilateral Carbon Credit Fund	EIB, EBRD, Governments of Finland, Belgium (Flanders), Ireland, Luxembourg, Spain and Sweden	CEZ (Czech Republic), Endesa (Spain), Gas Natural (Spain), PPC (Greece), Union Fenosa (Spain) and Zeroemissions (Spain)
World Bank Carbon Partnership Facility	World Bank and Governments of Spain, Norway and Sweden	Endesa SA and E.ON Carbon Sourcing North America LLC.
Private sector funds		
Africa Enterprise Challenge Fund	Donors agencies including the Swedish International Development Agency	Alliance for a Green Revolution in Africa (AGRA)
Capital Market Climate Initiative (CMCI)	U.K. Department of Energy and Climate Change	Institutional investors, investment banks, insurance companies, stock exchanges, credit rating agency, think tanks.
Institutional Investors Group on Climate Change (IIGCC)	Public sector members of The Climate Group	Private sector members of The Climate Group

Public-private partnership	Public partners	Private partners
Long-Term Investors Club	Cassa Depositi e Prestiti, KfW Bankengruppe, and the European Investment Bank	Caisse des Dépots, a French investment group
NEFCO Environment Fund	Nordic Government Agencies	Private sector fund operator and private investors

Source: Prepared by the authors of this guidebook.

5. Key Elements of Proposals and Guidelines for Preparation

5.1 Overview

Climate change mitigation actions proposed in TNAs may consist of:

1. Individual projects – such as building a wind farm or a solar PV generation facility that feeds power into the utility grid.
2. Programmes – which systematically develop and finance a series of smaller projects such as a credit line for financing energy efficiency projects in SMEs, or a bulk procurement and distribution programme for compact fluorescent lamps (CFLs).

Such programmes may represent aggregates of many small projects, which is appropriate for energy efficiency and smaller scale renewable energy markets which consist of large numbers of small projects. Some financing sources may be more appropriate for projects, for example, private equity funds or mezzanine financing. Other sources of funding may be more appropriate for programmes, for example a clean energy fund for small EE and RE projects.

Countries interested in obtaining financing for climate change mitigation programmes or projects need to understand the specific requirements of the financing sources that they may be seeking assistance from. In the case of most MFIs and BFIs, the climate change mitigation activities are negotiated between the financing source and the recipient country. However, in order to get the needed approvals from the appropriate authorities (such as the Board of Directors), formal and detailed proposals have to be prepared. While the MFIs and BFIs often participate in the preparation of such proposals, or in some cases, provide technical assistance through third parties, the recipient country is responsible for the preparation of the proposals.

In the case of the special funds for climate change mitigation and carbon funds, each fund has certain specific requirements for the programme or project proposals. Most of them will evaluate proposals from different proponents using a competitive process because funds are limited and there are more potential proposals and recipients than there are funds to support them. Therefore, the preparation of high quality proposals that are responsive to the requirements of the funds is a critical factor for a successful application.

This section addresses the key elements of programme and project proposals and provides some guidelines for proposal preparation.

5.2 Key elements of proposals for financing

5.2.1 Proposals to MFIs and BFIs

The specific project requirements of the MFIs and BFIs vary. However, they generally need the proposers to provide detailed information that is fairly common across the different funding sources. In general, this section discusses proposals for financing that are:

1. **From** a developing country government agency, such as the ministry of industry, trade, energy or environment
2. **To** one or more of the donor, public or concessional climate financing sources discussed in this report, (but not to private commercial financing sources, although mobilising commercial financing can be a strong part of the proposal design)
3. **For** undertaking climate change mitigation programmes or projects
4. **To** develop, implement and finance one or more climate change mitigation activities in specific target markets.

5.2.2 General proposal requirements

In general, the financing sources for programmes or projects will require the following type of information in a proposal:

1. Basic definition of the programme or project activities
2. Definition of how the programme or project activities are consistent with the strategic objectives of the financing source
3. Rationale defining why the activities are being undertaken
4. Specific objectives
5. Programme or project costs, amount to be financed from the proposed source, and the amount and sources of other financing available
6. Definition of the baseline conditions in the absence of the activities, including key issues, barriers and challenges
7. Description of major tasks or components
8. Identification of how the activities will address the key issues, barriers and challenges and move beyond the baseline conditions to produce beneficial results for climate change mitigation
9. Statement of expected results and benefits, including quantification of the climate change benefits
10. Definition of risks, their potential impacts on results and the proposed risk management plan
11. Description of implementation and management plan
12. Definition of measurement, reporting and verification (MRV) methodology.

Basically, the preparation of a financing proposal requires answering a series of questions that may be characterised as: what, where, who, how, why, to whom, what if, and how much.

1. **What** is being proposed? What is the core concept of the programme or project and its main objectives?
2. **Where** will the proposal be implemented? Describe the setting of the programme/project.
3. **Who** will implement the proposal and see it to completion, and who else must be involved? Describe the management and implementation team.
4. **How** will the proposal be implemented? Outline the implementation and operational plans.
5. **Why** is the proposal important and why should it be supported? Identify the key characteristics of the project and its benefits for climate change mitigation.
6. **To** whom is the proposal addressed? Describe the target audience.
7. **What** if things do not go as planned? Define the potential risks and uncertainties, assess their impacts on the results, and develop a risk management plan.
8. **How** much funding is being sought and what are the different sources of funding? Document the total requirements, identify available co-financing and define clearly how much is being asked for from the financing source.

5.2.3 Experience with TNA financing proposals

At the UNFCCC TNA workshop in Bonn in 2011,[50] there was a discussion of the TNA process and a review of the experience with financing proposals submitted by a number of countries. Observations included:

1. There appears to be a 'disconnect' among development professionals, entrepreneurs who identify projects, and those who provide resources (services and financing)
2. Many tools and general 'how to' instructions have been developed, but there is a need for a more complete, accessible, balanced, process oriented and modular guide to preparing and presenting proposals (van der Plas, 2011).

Typical problems identified by reviewers of financing proposals include (i) incomplete proposals that fail to provide all of the information needed by the financing sources, or unbalanced proposals; (ii) unbalanced proposals that provide too much emphasis on some project elements and too little on others; (iii) lack of responsiveness to the requirements of the funders; and (iv) unclear or poor writing which may make it difficult to understand and evaluate the proposal.

UNFCCC has prepared a guidebook on preparing technology transfer projects for financing (UNFCCC 2006) and has conducted hands-on training on preparing TNA proposals for financing.

An organisation that has been active in helping the development of successful financing proposals is the Clean Technology Initiative's Private Financing Advisory Network (CTI-PFAN), which is a multilateral

50 http://unfccc.int/ttclear/jsp/TrnDetails.jsp?EN=TNAWshpBonn

PPP initiated by the Climate Technology Initiative (CTI) in cooperation with the UNFCCC Expert Group on Technology Transfer. CTI-PFAN operates to bridge the gap between investments and clean energy businesses.[51] Recognising that many proposals do not meet the requirements of the financing sources, CTI-PFAN provides technical assistance and mentoring support for development of a business plan, investment pitch, and growth strategy, and helps programme proponents in arranging and structuring financing. These services are provided to programme or project developers at no up-front cost, with the remuneration to CTI-PFAN from a success fee upon financial closure.

5.3 Major elements of programme proposals

Effective proposals for climate change mitigation programmes should address the following elements:

1. Programme design, including Programme objectives and target markets
2. Implementation plan and partners
3. Technical assistance and capacity building needs
4. Budget and use of funds
5. Expected results, evaluation plan and impact metrics
6. Direct results and indirect effects (including market transformation effects)
7. Pathway to sustainability and replication
8. Programme implementation risks and risk mitigation

The above outline is indicative. The actual content of any given funding proposal needs to be developed in consultation with the specific funding source to which the proposal is addressed and using its required format. The discussion below addresses proposals for EE/RE programmes.

Programme Design and Development Objectives. The programme design should be summarised, including target markets, types of EE/RE equipment being promoted and the justification for the design provided based on the market research and assessment. It is useful to compare the proposed programme design to the design of other climate change mitigation programme designs, and indicate how this programme builds on lessons learned from similar programme designs and models.

Typical EE/RE market developmental objectives may include the following:

1. Promote the entry of new EE/RE technologies into the market
2. Promote the growth and business development of EE/RE project, equipment and service companies
3. Build the capacities and experience of local financial institutions in EE/RE project finance, provide more favourable credit conditions to borrowers, and promote financial innovation in the market
4. Demonstrate effective new EE/RE project finance business models

51 http://www.cti-pfan.net/

5. Provide practical demonstrations and develop effective methods for how utilities can serve as a platform for marketing and delivering EE/RE projects and services in ways that benefit the customer, the utility and the general economy and society.

Implementation Plan and Partners. Project functions and roles should be laid out. Implementation partners can include CFIs, EE/RE companies, end-user associations and others.

1. Implementation Partners. All programme functions and roles should be laid out. Implementation partners can include CFIs, EE/RE companies, end-user associations and others.

2. Project Development Cycle. The EE/RE project development cycle is also a useful way to organise the presentation of programme activities, tracing project development steps from marketing, engineering, financial planning through to financial closing and implementation.

3. Marketing and Outreach. Marketing and outreach are critical functions that drive programme participation. Marketing allies include the EE/RE companies which seek to sell their equipment and services. Typical EE/RE project economics from end-users' perspective should be described, as this will affect decisions to implement.

4. Financing Mechanisms. The financing mechanisms that will be deployed should be described, including: the CFIs that will offer the financial products, the basic credit structure and collections mechanism for the financial product, any credit enhancements, the financing terms and how the terms are matched to the EE/RE project economics, and finance origination steps. Strategy for leverage of the programme funds needs to be defined, and how the programme will recruit financial institution partners and make this an attractive business proposition for them. The target portfolio of projects to be funded can also be described.

5. Stakeholders and Advisory Committee. Programme stakeholders should be identified, parties who have an interest in the programme success, including energy users, EE/RE companies, financial institutions, energy utilities and interested government and development agencies, including NGOs. Many programmes set up an advisory committee of stakeholders to provide informal advice to the programme during operations and also provide a channel for communications.

6. Programme Management. The organisation and staff that will manage the programme should be identified and their capacities to manage programme implementation roles discussed.

Typical roles of the programme management office include the following:

1. Work with partners to implement the project, especially during the start-up phase when project methods are being developed

2. Procure and manage external consultants - both national and international - involved in the TA programme, including for project start-up

3. Assist in development and structuring of EE/RE project transactions; this is the main goal and transaction support is often needed

4. Provide the leadership and hands-on operational guidance to maintain, further develop and adapt the project's vision and strategy during the start-up and operations period

5. Recruit new partners and conduct the outreach programme in all its dimensions
6. Manage other donor funds and provide reports to donors as required
7. Organise and implement the monitoring and evaluation of the Programme and procure and manage external evaluation consultants
8. Communicate with Programme stakeholders and organise and conduct meetings of the Programme's Advisory Council, including liaise with and provide reports to relevant government ministries.

Technical Assistance and Capacity Building Needs. Programmes will typically include a technical assistance and capacity building component, working with key programme implementation partners. TA can include transaction structuring, marketing support, trainings, business planning, assistance to EE/RE companies to integrate financing with their offers, engineering due diligence for CFIs to confirm the technical soundness of proposed projects, and other support typically focused on preparing projects for investment. Implementation partners should be interviewed to define what technical assistance and capacity building needs they have to perform their given roles.

Budget and Use of Funds. The programme budget and funding request must be specified and broken down. Typical uses of funds include:

1. Programme management, including normal staff, office, travel and start-up expenses
2. Engineering services and other technical assistance
3. External consultants
4. Marketing
5. Training
6. Evaluation and monitoring
7. Use of funds for concessional co-finance, such as loan loss reserves or other credit enhancements or direct capital subsidies.[52]

Sometimes, programme funds may be used for credit enhancement or reimbursable grants, whereby funds are used but may recycle or get returned to the programme. In this case, the exit strategy (i.e. what happens to these funds over time as the programme concludes) needs to be addressed.

Expected Results. Expected results can typically be divided into direct results and indirect or market transformation results being sought. Direct results must include estimated energy saved or produced by the EE/RE projects that will be directly supported by the programme and the associated estimated GHG reductions. From these values, the programme costs per unit emissions reduction can be estimated. Other main direct results include the total investment value of EE/RE investments which will be supported and the estimated number of transactions.

52 For discussion of methods to structure public co-financing and credit enhancement programmes, please see MacLean, 2008. Mainstreaming Environmental Finance Markets (I) – Small-Scale Energy Efficiency and Renewable Energy Finance. Berlin, Germany. http://www.eefinance.net/images/MacLean%20KfW%20Paper%20on%20EE-RE%20Finance%20Final%20Nov%2021.pdf

Indirect results focus on market development, capacity building, market transformation and leveraging effects of the project on increasing investment in mitigation activities.

Evaluation and Impact Metrics. Monitoring and evaluation (M&E) are integral to the implementation of the programme. The M&E plan should be developed early, to ensure that a baseline is established and begin collecting data needed for the evaluation. A baseline study will describe the current state of the market and level of EE/RE project investment activity in the markets targeted by the programme. A programme's M&E framework will serve several purposes:

1. Monitor progress towards programme objectives
2. Strengthen programme performance and management by providing feedback on implementation
3. Provide a base for reporting and technical and financial accountability.

M&E will evaluate the programme's direct impacts: total projects supported by the programme and their related GHG emissions reductions. Other key indicators measures should also be defined, including indirect market development impacts. In order to capture market transformation effects, an M&E plan should assess the programme's indirect impacts and demonstration effects. This is often done through interviews with programme stakeholders, both participants and non-participants.

Typical impact metrics include the following.

1. For EE/RE Projects and End-users:
    i. Number of EE/RE projects implemented and financed with direct programme support
    ii. Total value of EE/RE investments supported
    iii. Total number of end-users engaged at each stage of the sub-project development cycle: marketing, audit, project development, and project implementation
    iv. Energy saved and GHG emissions avoided due to EE/RE projects directly supported
    v. Similar date for EE/RE projects implemented without direct programme support but attributable to the marketing done and public awareness created by the programme
    vi. Energy saved per US$ invested
    vii Emissions avoided per US$ invested.
2. For the EE/RE companies:
    i. Sales volume of EE/RE projects and services by participating EE/RE suppliers
    ii. Number of participating EE/RE supplier companies and their improved business performance
    iii. Range of EE/RE equipment and services offered
    iv. Training of EE/RE suppliers in new marketing and equipment finance methods and adoption of these methods.
3. For Financial Institution Partners and credit enhancement programme, if applicable:
    i. Total value of loans or financing transactions supported

ii. Number of EE/RE project loan transactions

iii. Extended loan tenors, e.g. to 5+ years

iv. Payment performance of guaranteed loans

v. Actual losses incurred and guarantee claims payments made.

vi. Increase in the 'guarantee ratio' (guarantee reserves to total loans guaranteed)

vii. Reduction in level of credit enhancement needed over time

viii. Number of financial institutions participating

ix. Total value of loans provided by banks without credit enhancement.

Sustainability and Replication. Many programmes seek to demonstrate successful financing mechanisms and business models, engage commercial parties and then promote a commercially self-sustaining market dynamic, so that market actors will continue to develop, implement and finance EE/RE projects after the programme is completed. This is an attractive strategy for funders. The plan of the programme to achieve this result should be discussed, along with strategies for replication. A budget for replication could constitute a second phase of a programme.

Risks and Risk Management. All programmes involve certain risks, in programme implementation and also in market conditions that are outside the programme's control. For EE/RE project development and finance programmes, the biggest implementation risks typically concern marketing success and the long sales and development time required to get projects ready for investment. This is also a main focus of technical assistance efforts and programme activities.

The major types of risks include:

1. Country macro-economic conditions, interest rates, inflation, foreign exchange rates or availability of funds
2. Policy risks
3. Marketing success and uptake
4. Future energy prices and government subsidies or policies
5. Credit risks of energy users
6. Loan or financing performance risks
7. Implementation risks, including staffing such as staffing.

These risks should be assessed and methods for mitigating and managing these risks described, by building on the capacities of programme partners and experienced consultants, through policy support from government agencies, through contingency plans, through adjustments to programme financing parameters such as levels of capital subsidy or credit enhancements.

5.4 Major elements of project proposals

Individual projects such as large utility scale and grid-connected RE projects (such as a solar PV facility, wind farm or biomass energy plant) are a distinct category of climate mitigation actions for which a country may seek financing for a single project. Proposals for such large RE projects typically must provide a standard set of information somewhat different from the programme information discussed above. The following checklist addresses the typical due diligence agenda for financing sources to consider investment in large grid-connected RE projects. This checklist is indicative and not exhaustive; project specific due diligence will involve review of additional information according to the circumstances of the specific project and the financing source.

1. **Project Sponsor.** Provide background information on the primary project sponsor or developer including: company history and background; management; financial statements; experience in renewable energy projects (of the type proposed, e.g., wind power) and other similar projects, including project development, construction, power sales contracting, operations and financing; and, other projects under development.

2. **Other Key Parties to the Project.** Provide a list of other key parties to the project, indicating their role and background information on their experience, management, and financial condition. Key parties may include: power purchaser; site owner; engineer; construction contractor and major sub-contractors; key equipment suppliers (e.g. turbines for wind); operations contractor.

3. **Renewable Energy Resources.** Provide summary assessment of the renewable energy resources being used. For example, wind resources measurement data for a wind site. Or for a bio-mass energy project, for example, source and control of bio-mass fuel supply, fuel supply agreements and pricing (if applicable), transportation/delivery and material handling responsibility.

4. **Project Site.** Provide background information on project site including: site location and ownership; site lease terms, as applicable, or other evidence of project sponsor's site control/access.

5. **Power Purchase Agreement (PPA).** Provide summary description of PPA terms and pricing. Provide copies of all PPA-related documents. Include any transmission, wheeling or other agreements required for Project electric deliveries. Summarise creditworthiness of the power purchaser.

6. **Easements and Interconnection.** Summarise interconnection plan. Identify any approvals needed for interconnect plan. Identify any easements that are needed for transmission lines, etc. Confirm electric utility cooperation and agreement with interconnection plan.

7. **Key Technology and Equipment Suppliers.** Indicate key equipment suppliers, description of technology and terms of purchase. If purchase decision has not been made, indicate status of purchase decision and/or negotiations. Provide summary assessment of technical performance, history of the technology proposed (including history of similar installations), plant performance estimates (capacity/availability), future repair and replacement needs and plant use life. Indicate anticipated warranty terms and other services to be provided by the supplier(s). Indicate status of supplier's review of project-specific details and power/energy output estimates.

8. **Total Capital Cost Estimate and Breakdown.** Estimate total project capital costs. Where possible, base estimate on firm construction and equipment quotes. Estimate should include:

    i. Turnkey construction, plant and equipment, including wind turbine purchase and all site erection and civil works and interconnection

ii. Engineering and construction management

iii. Project development (breakdown between costs and fees)

iv. Site acquisition (if applicable) and final site improvements

v. Construction interest (based on disbursement schedule)

vi. Finance fees and expenses, including legal

vii. Working capital and reserve funds, i.e. debt reserve.

9. **Month to Month Disbursement Schedule** for construction financing, indicating date and amount for and construction milestone (progress point) achievements justifying each disbursement.

10. **Permits and Environmental Impact Assessment.** Provide list of all project permits, indicating name and description of the permit, permitting agency, and status of permit. Assess any critical path difficulties in obtaining permits. Provide copies of permits obtained. Identify the project professional, either engineer or attorney, best suited to give advice on completeness of permits. Review environmental impacts of the project and related assessments.

11. **Project Construction.** Provide summary term sheet and copy of project construction contract. Indicate allocation of project construction risks (i.e., on time, on budget, responsibility for start-up and acceptance testing, and according to performance specifications). Indicate whether contract obligations are backed by Performance and Payment Bonds. Summarise Project acceptance test criteria and procedures.

12. **Project Operating Costs.** Estimate non-fuel project operating costs. Where possible, base estimate on firm quotes. Include, where applicable: plant/facilities on-site labour; utilities; plant maintenance including parts; contract services; site lease; insurance; property taxes; management; monitoring and general and administrative; contributions to plant/equipment repair/replacement fund, and other.

13. **Project Operations Contracts.** Identify party who will operate the project. Provide summary term sheet and copy of operations contract, if applicable.

14. **Project Legal and Organisational Structure.** Summarise proposed legal and organisational structure for the project.

15. **Project Financing Plan.** Indicate total sources of funds, matching to uses of funds indicated above, Project Capital Costs. Indicate amount and structure of project debt financing and estimated debt terms. Indicate amount of project equity and/or quasi-equity financing. Indicate amount of equity financing which will be committed and funded by the project sponsor and other parties; indicate the amount of project equity financing needed. Indicate the planned investment structure for the needed equity financing. Summarise plan to solicit and efforts made and response received to date seeking project debt and equity financing.

16. **Requested Concessional Funding.** Indicate requested concessional funding and how the requested concessional funding will leverage other funding.

17. **Project Development Steps to Completion.** If project development tasks remain to get the project ready for construction financing closing and start, indicate those tasks and their estimated

costs and confirm the project sponsor's ability to contribute the necessary remaining development funds.

18. **Project Cash Flow Projection and Financial Analysis.** Project estimates of all project revenues and expenses for the expected term of the project debt. Justify all assumptions. Calculate Debt Service Coverage Ratio under various financing structures. Target ratio: 1.20-1.50, depending on other security features. Perform financial projection and sensitivity analysis using different revenue and expense assumptions. Examine price/cost escalation rates and estimate how revenues and expenses will fluctuate over time. Calculate Equity investor return on investment under different equity investment arrangements. Test financial model and key results (debt coverage ratio and equity investment IRR) given changes in key variables and financial structure assumptions including: RE resource variations, power pricing, capacity/availability assumptions, maintenance costs, debt/equity ratio, debt term, debt interest rate, etc.

5.5 Illustrative detailed proposal requirements – GEF

One of the most important financing sources for climate change mitigation programmes and projects is the Global Environment Facility (GEF). The information provided in this section is developed from the requirements of the GEF and the World Bank, which is representative of the various MDBs operating across the world. The GEF and the World Bank do not distinguish between programmes and projects and the word 'project' in the discussion below applies to all climate change mitigation activities, whether they be programmes or projects.

GEF provides grants for climate change mitigation projects and requires the preparation of a Project Information Form (PIF) for each grant proposal submitted for approval. The World Bank provides loans to governments and requires the preparation of a Project Concept Note (PCN) for each project. The requirements of these two documents are similar although the formats in which the proposal information is submitted are quite different. It should be noted that the World Bank often serves as an implementation agent for a GEF grant which may be co-financing a World Bank loan. In such cases, the GEF PIF is the overriding document.

Both the PIF and the PCN essentially represent preliminary proposals and once these are approved, a more detailed project appraisal is conducted leading to a Project Appraisal Document (PAD). The PAD has a much more detailed documentation of the project.

As indicated above, the proposal requirements identified above are generally applicable, but individual financing sources may have somewhat different requirements or specific formats. This section provided detailed example of the requirements for the preparation of a Project Information Form (PIF) for financing proposals to the Global Environment Facility (GEF), which was selected because it is perhaps the most comprehensive set of requirements pertaining to proposals to public financing sources and is a mandatory requirement for applications for financing to GEF.

The preparation of a GEF PIF will typically require the following information:

1. Project Identification – this includes the project title, country of focus, GEF Focal Area addressed by the project, implementing agency designation (GEF generally works through the MDNs or agencies of the UN as implementing agents), project submission date and project duration, and the fees charged by the implementing agency.

2. Relationship of Project to the GEF Strategic Framework (GEF, 2011) – this is a very important requirement wherein the proposal is required to define the focal area, the expected project outputs and outcomes as they relate to the GEF focal areas,[53] funding requested from GEF, and the amount of co-financing secured (Note that GEF generally requires a substantial amount of co-financing, which may be in cash or in kind). This information is to be submitted for each GEF Focal Area covered by the project. In this part it is expected that the proposal will define the specific outcomes in terms of GEF objectives (such as the number of tons of GHG emissions reduced) for each GEF Focal Area.

3. Project Framework – this part provides a description of the project objectives, major components and sub-components, project outcomes and outputs for each of these, and the GEF financing and project co-financing by each component and sub-component. The total project costs including project management costs are also to be provided.

4. Details of Co-Financing – the proposal needs to define the various sources of co-financing, and the type of co-financing and amount of co-financing from each source. The co-financing sources may include any leveraged funds (for debt and/or equity financing) from the private sector.

5. Project Justification – the justification should include a narrative description of how the project is consistent with the specific objectives outlined in the GEF Focal Area Strategies document, as well as a statement of how the project relates to the country's national strategies and plans in the relevant areas.

6. Description of the Baseline – in this part of the PIF, the proposal needs to define the conditions in the country and the problems/needs the project is trying to address. It may define the barriers to implementation of the climate change mitigation project(s) and define what is currently being done (if anything) to overcome these barriers. This description of 'baseline' conditions is very important as the GEF will assess what results will be accomplished by the funding provided that will be beyond the baseline.

7. Incremental or Additional Activities to be financed – this section needs to describe in detail the activities planned to be undertaken using the funds provided by GEF that will be incremental or additional to the baseline defined earlier. This section of the proposal will generally describe in detail the tasks, activities and expected outputs and define how these outputs will be achieved. It is also important in this section to demonstrate how these activities and outputs will allow the country to move beyond the baseline conditions.

8. Definition of Socio-Economic Benefits – the proposal needs to define the socio-economic benefits that will be delivered by the project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits, including climate change mitigation.

9. Risks and Risk Management – the proposal needs to identify the risks, assess the magnitude and importance of each risk, define the impact of each risk on the achievement of the desire outcomes and outputs, and identify how these risks will be mitigated or managed.

10. Key Stakeholders – the proposals have to identify the stakeholders involved in the project including the private sector, civil society organisations, and local and indigenous communities, and describe their respective roles.

53 The GEF Focal Areas in the current (5th) funding cycle are: biodiversity, climate change, international waters, land degradation (desertification and deforestation), chemicals, sustainable forest management, and cross-cutting capacity development.

11. Cooperation and Coordination – this part of the proposal requires identification of other ongoing programmes, projects or initiatives, funded by donor agencies, the national government and/or the private sector, which may be related to the activities and outputs of the proposed project. To the extent such activities exist, the proposal must define how the project will cooperate and coordinate its activities with these projects and avoid or minimise overlap or duplication.

12. GEF Implementing Agency – GEF requires an explanation of why the proposal has selected the particular implementing agency and what its comparative advantages or benefits are.

13. Project Implementation – this final section defines how the selected implementing agency plans to manage and implement the project. It includes a statement of how the project fits into the GEF agency's programme and the staff capacity in the country to follow up project implementation.

14. Monitoring and Evaluation – the proposal needs to present an adequate plan for monitoring and evaluation of the project results. While the GEF will generally conduct an independent evaluation of the project upon its completion, it needs to assure that appropriate monitoring is being conducted to obtain and document the information needed for project evaluation.

The proposal must also include a statement of approval or endorsement by the country's GEF Operational Focal Point (which is usually the Ministry of Finance or the ministry of the Environment).

5.6 GEF checklist for evaluation of the financing proposals

Most financing sources will use a formal evaluation process to examine proposals and evaluate whether they meet the objectives and requirements of the financing organisation. Evaluation criteria and procedures will vary from one source to another. The individuals and organisations preparing the country proposals need to review these to assure that their proposal meets the criteria.

It is useful to review the evaluation checklist used by GEF to review and assess each proposal. Table 5.1 provides this checklist, which includes 28 questions.

Some financing sources use a two-stage evaluation process. The first stage invites concept proposals that require substantially less time to prepare than full proposals. The concepts re then screened and the concepts that meet the requirements of the financing sources are requested to submit detailed proposals.

5.7 Requirements of private financing sources

In general, private financing sources will require similar information on the project as defined above, but will insist on much more detailed financial information. For example, since the private financing sources are interested in a return on their investment they will need to get from the project developers or proponents expected information on:

1. Financial structure including details of equity and debt financing
2. Income and expenses
3. Cash flow streams
4. Balance sheet

5. Financial parameters such as net present value and internal rate of return
6. Detailed identification and assessment of project risks and their impacts on all of the above
7. Measures to manage the risks
8. Contingency plans
9. Exit strategy for the external investors.

Table 5.1 GEF proposal evaluation checklist

GEF evaluation checklist	
1	Is the participating country eligible?
2	Has the operational focal point endorsed the project?
3	Is the agency's comparative advantage for this project clearly described and supported?
4	If there is a non-grant instrument in the project, is the GEF agency capable of managing it?
5	Does the project fit into the agency's programme and staff capacity in the country?
6	Is the proposed grant (including the agency fee) within the resources available from the GEF sources?
7	Is the project aligned with the focal/multifocal areas/ LDCF/SCCF/NPIF results framework?
8	Are the relevant GEF 5 focal/multifocal areas/LDCF/SCCF/NPIF objectives identified?
9	Is the project consistent with the recipient country's national strategies and plans or reports and assessments under relevant conventions, including NPFE, NAPA, NCSA, or NAP?
10	Does the proposal clearly articulate how the capacities developed, if any, will contribute to the sustainability of project outcomes?
11	Is (are) the baseline project(s), including problem(s) that the baseline project(s) seek/s to address, sufficiently described and based on sound data and assumptions?
12	Has the cost-effectiveness been sufficiently demonstrated, including the cost-effectiveness of the project design approach as compared to alternative approaches to achieve similar benefits?
13	Are the activities that will be financed using GEF/LDCF/SCCF funding based on incremental/ additional reasoning?
14	Is the project framework sound and sufficiently clear?
15	Are the applied methodology and assumptions for the description of the incremental/additional benefits sound and appropriate?
16	Is there a clear description of: a) the socio-economic benefits, including gender dimensions, to be delivered by the project, and b) how will the delivery of such benefits support the achievement of incremental/ additional benefits?
17	Is public participation, including of Civil Society Organisations (CSOs) and indigenous people, taken into consideration, their role identified and addressed properly?

GEF evaluation checklist	
18	Does the project take into account potential major risks, including the consequences of climate change and provides sufficient risk mitigation measures? (i.e. climate resilience)
19	Is the project consistent and properly coordinated with other related initiatives in the country or region?
20	Is the project implementation/ execution arrangement adequate?
21	Is the project structure sufficiently close to what was presented at PIF, with clear justifications for changes?
22	If there is a non-grant instrument in the project, is there a reasonable calendar of reflows included?
23	Is funding level for project management cost appropriate?
24	Is the funding and co-financing per objective appropriate and adequate to achieve the expected outcomes and outputs?
25	At PIF stage: comment on the indicated co-financing
	At CEO endorsement stage: indicate if confirmed co-financing is provided.
26	Is the co-financing amount that the agency is bringing to the project in line with its role?
27	Have the appropriate tracking tools been included with information for all relevant indicators, as applicable?
28	Does the proposal include a budgeted M&E Plan that monitors and measures results with indicators and targets?

Source: Global Environment Facility

5.8 Development of the baseline

A very important element of a proposal for financing climate change mitigation project or programme is the development of a credible baseline scenario. Essentially the baseline defines the market conditions in the absence of the project. The reason this definition is important is that the financing sources are interested in determining what will be the effect of their financial contributions. The benefits of the project will be the net difference between what would happen in the absence of the project and what is expected to happen when the project is implemented. It is this net reduction in climate impacts that are attributable to the financing provided to the project and the financing institutions are interested in assuring that their funds are being used efficiently and effectively to produce net benefits that are substantial relative to the financing provided. The CDM methodologies provide good examples of how to prepare an appropriate baseline.

Many financing sources are now starting to define criteria to relate the amount of financing to the mitigation results. For example, GEF is interested in the ratio of dollars per ton of GHG emission reductions. Most GEF projects are required to calculate and report on GEF funding spent per ton of CO2 equivalent savings.

It should be noted that private financing sources are more concerned with cash flows and financial returns on their investments, and may not require the detailed definition of the baseline and the net benefits calculations that most public financing sources do.

Similarly, KfW is now requiring calculation of the expected emission reductions per million Euros invested in its energy efficiency projects, as well as for renewable energy projects.

Note that the baseline does not involve simply documenting the conditions before the start of the project implementation. While this documentation is necessary, it is not sufficient, because most climate change mitigation projects are multi-year projects and their beneficial impacts occur over a long period. To calculate the net benefits from a mitigation project, the baseline scenario must develop a projection of the conditions that would prevail in the absence of the project implementation. This requires the proposing country to develop a forecast of the climate impacts in the absence of the project, rather than simply document the conditions prior tom project start. The financing institutions reviewing and evaluating the proposal are likely to make a careful assessment of the baseline scenario to develop the estimates of the incremental benefits. It is therefore important to prepare the baseline scenario professionally and document all the important assumptions.

For example, if the mitigation project related to implementation of a renewable energy power plant is to replace a conventional fossil fuel plant, the baseline scenario needs to develop a credible projection of the power system characteristics for the duration of the life of the renewable energy project (this could be economic lifetime, technical lifetime or crediting lifetime of the project). If the local electric utility is planning to change its generation mix, this should be taken into account in the baseline projection. The proposal then needs to show exactly what resources are being replaced by the renewable plant to calculate the climate change benefits. The incremental benefits will be the difference in GHG emissions from the power system with and without the new facility.

Similarly, for an energy efficiency project, the baseline scenario needs to estimate the implementation of the proposed energy efficiency measures in the absence of the programme over the time horizon of the EE project being proposed. The incremental benefits of the EE project will be calculated as the difference between the estimated energy savings with the EE programme and the savings that would have occurred in the marketplace without the programme.

The development of the baseline scenario can be tricky and sometimes difficult. This is especially the case when the baseline describes a situation which will be replaced by the project and for that reason cannot be monitored anymore. This counterfactual character of the baseline has resulted in a safeguard measures to avoid that project developers overstate the baseline description so that a larger environmental benefit can be claimed. To address this issue and avoid overstating of project or programme benefits, the financing agencies have developed methodologies and tools to conservatively estimate and document the baseline. Countries preparing proposals for mitigation financing should review some of the prior successful applications that have developed credible baseline scenarios and assess the applicability of the tools and methodologies used.[54]

5.9 Risk assessment

Risk assessment is an important step in the proposal preparation. All financing sources will require the proposing entities to identify the major risks that may affect the successful implementation of the proposed project. Examples of typical risks of climate change mitigation projects include:

1. Technology risk – will the proposed technology work as expected and/or possibly require modification to function within the country context?

2. Implementation risk – will the implementation be completed within the specified time and budget
3. Financial risk – will the project yield the expected financial results?
4. Regulatory risk – will government policies and regulations change in a manner that will adversely influence the project?
5. Political risk – will any changes in government structure negatively influence the success of project implementation?
6. Market risk – will the market accept the technology or measure being implemented?
7. Co-financing risk – will the anticipated co-financing be available when needed?
8. Price risk – will changes in market prices adversely affect the project economics.

A careful risk identification and assessment needs to be created for inclusion in the proposal. It is not sufficient to simply identify the risks. The proposal needs to assess the likelihood of each risk and define the potential impacts of the risk on the project implementation and results. It also needs to define the measures that will be taken to mitigate each risk and its impacts.

While each proposed project is unique, and the specific risks pertaining to that proposed project need to be specifically identified, much can be learned from the experience of projects financed by the various financing sources identified in this report. Project proponents can benefit from studying the proposals prepared in prior projects financed by the relevant sources and learning from them to develop an appropriate risk assessment and management plan.

5.10 Justifying the financing need

Because most financing sources receive more proposals than they can fund, it is important to make a strong case for justifying the need for financing of the proposed project. Each proposal will have its own unique needs that will define the justification for financing.

The need for external financing may be justified in situations such as:

1. Limited availability of funds for financing mitigation projects (lack of liquidity)
2. Reluctance of existing financing sources to provide financing for mitigation projects due to lack of knowledge or understanding
3. High perception of risk of investments in mitigation projects
4. Pricing distortions and/or subsidies to non-climate-friendly technologies
5. High cost of the mitigation technologies that make them economically unattractive
6. Characteristics of certain types of mitigation projects that make them unattractive for conventional financing.

54 The GEF PIFs and the PADs developed by MDBs are available on their websites.

The proposal needs to identify which of these (or other) barriers are present and are hindering the implementation of the mitigation programme or project envisioned. An excellent discussion of the potential barriers is provided in the Barriers Guidebook prepared by UNEP for the TNA project (Boldt et al., 2012).

Once the barriers have been defined, the justification for financing should follow the steps outlined below:

1. Define the existing situation and document the barriers and challenges that are preventing the mitigation actions from being implemented
2. Identify and document the baseline conditions in the absence of the project
3. Describe the project activities that are targeted at addressing the barriers and challenges
4. Define clearly why these activities may not be undertaken without the additional financing requested. (This step becomes very important because most sources require co-financing and the proposal needs to identify sources for such co-financing. But the proposal must also demonstrate that these co-financing sources will only 'come to the table' if and when the proposal is successful in obtaining the financing sought.)
5. Describe how the financing will leverage the co-financing and together achieve the results that will lead to the mitigation
6. Document clearly all information and assumptions to develop and support the justification for financing the project
7. Before preparing the justification for the financing, it would be very useful to review prior proposals submitted to the financing source to obtain a good understanding of how the proposal should be prepared.

6. Concluding Remarks

6.1 Summary of financing sources

The major sources of financing for climate change mitigation projects include multilateral, bilateral and private financing sources.

Multilateral financing sources include multilateral development banks (MDBs), such as the World Bank; agencies of the United Nations, such as UNDP and UNEP; and special international agencies created by these MDBs (such as the Global Environment Facility) in collaboration with various national governments; (which are together referred herein to as multilateral financial institutions or MFIs). The MFIs have established a number of special funds for climate change mitigation, such as the Climate Investment Funds (CIFs) administered by the World Bank – the Clean Technology Fund (CTF) and the Strategic Climate Fund. In addition, the MFIs have established a number of Carbon Funds to facilitate the sale of the certified emission reduction (CER) credits from mitigation projects.

Bilateral financing institutions (BFIs) are created and directed by a national government for the purpose of giving aid or investing in targeted development projects and programmes in developing countries and emerging markets. BFIs carry out the mandates given to them by the national governments which are based on the strategic objectives of the governments and their focus on specific geographic areas and technologies.

Private financing sources, which are increasingly being involved in financing climate change mitigation projects, include a wide range of local and international banks and financial institutions, venture capital and private equity funds, pension funds and some special funds created to address climate change mitigation. Private financing sources also include carbon finance companies.

Many of the public (multilateral and bilateral) financing sources seek to leverage increased financing from private sources. To accomplish this, a number of public private partnerships (PPPs) have been established. PPPs are designed to leverage private flows to fill funding gaps, transfer service delivery risks, and improve the cost effectiveness of service delivery.

6.2 Summary of the proposal requirements of different financing sources

In general, the financing sources will require the following type of information in a proposal:

1. Basic definition of the project
2. Definition of how the project is consistent with the strategic objectives of the financing source
3. Project rationale defining why it is being undertaken
4. Specific project objectives

5. Project costs, amount to be financed from the proposed source, and the amount and sources of other financing available
6. Definition of the baseline market conditions prior to the initiation of the project, as well as definition of key issues, barriers and challenges
7. Description of project tasks or components
8. Identification of how the project activities will address the key issues, barriers and challenges and move beyond the baseline conditions to produce beneficial results for climate change mitigation
9. Statement of project results and benefits and results, including quantification of the climate change benefits
10. Definition of risks, their potential impacts on project results and the proposed risk management plan
11. Description of project implementation and management plan
12. Definition of project measurement reporting and verification methodology.

6.3 Summary of guidelines for potential applicants

Most financing sources receive more proposals than they can fund. Therefore it is important to make a strong case for justifying the need for financing of the project being proposed. Each proposal will have its own unique needs that will define the justification for financing.

The following guidelines are provided to justify the need for financing:

1. Define the existing situation and document the barriers and challenges that are preventing the mitigation actions from being implemented
2. Identify and document the baseline conditions in the absence of the project
3. Describe the project activities that are targeted at addressing the barriers and challenges
4. Define clearly why these activities may not be undertaken without the additional financing requested
5. Describe how the financing will leverage the co-financing and together achieve the results that will lead to the mitigation
6. Document clearly all information and assumptions to develop and support the justification for financing the project
7. Before preparing the justification for the financing, review prior successful proposals submitted to the financing source to obtain a good understanding of how the various parts of the proposal should be prepared.

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Appendix I
List of Financing Sources Studied

For this guidebook, the detailed information of over 100 sources of financing for mitigation actions in developing countries has been collected and analysed using a standard template. Below is an example of the information captured using the template for one of the financing sources. As the total length of these filled templates is over 300 pages and the information keeps changing, it has been decided to put the information in a database on mitigation financing sources at the TNA project's website http://www.tech-action.org, so that it is easier to search and identify relevant financing sources for their project ideas or proposals, and the UNEP Risø Centre will update the relevant information regularly.

1. Example of information collected for each financing source

ADB Clean Energy Financing Partnership Facility (CEFPF)

No.	Characteristic	Description
1	Name of Financing Source	ADB Clean Energy Financing Partnership Facility (CEFPF)
2	Sponsoring Organisation	Asian Development Bank
3	Address	6 ADB Avenue, Mandaluyong City 1550, Philippines
4	Key Contact (Name, e-Mail, and Website)	Samuel Tumiwa, Principal Planning and Coordination Specialist stumiwa@adb.org
5	Objectives	• Provide support for cost effective investments in technologies and practices that result in greenhouse gas mitigation • To finance policy, regulatory, and institutional reforms that encourage clean energy development.

No.	Characteristic	Description
6	Region/Country Focus	Developing Member Countries
7	Sector Focus	• Biomass, biofuel, biogas • Rural electrification and energy access • Distributed energy production • Waste-to-energy projects • Demand-side management projects • Energy-efficient district heating • Energy-efficient buildings and end-use facilities • Energy-efficient transport • Energy-efficient street lighting • Clean energy power generation, transmission, and distribution • Manufacturing facilities of clean energy system components, high efficiency appliances and industrial equipment • Energy service companies development.
8	Technology Focus	None
9	Type of Funding Support (e.g., loans, grants, etc.)	Co-financing, grant, technical assistance
10	Management/Governance	The Clean Energy Working Group will review and endorse project proposals. The Climate Change Steering Committee allocates resources to selected project proposals. Following fund allocation from CEFPF, the approval of the proposed CE project follows the normal ADB procedure.
11	Proposal/Application Requirements	
12	Eligible Projects/Programmes (whether only for soft items such as capacity building or policy advice, etc., or also for hard items, such as for plant and equipment) or Organisations	• Mitigation, Energy, Energy Efficiency, Fuel Switching, Renewable Energy. • About 30% of CEFPF's resources will be used for standalone technical assistance projects and direct charges; and about 70% will be used for grant components of investments and may also be used to procure equipment and works based on advanced technologies, back financing mechanisms or risk sharing facilities to promote CE, and services to lower barriers.

No.	Characteristic	Description
13	Eligibility Criteria	No information
14	Proposal Evaluation Criteria	No information
15	When and How to Apply	CEFPF reviews applications in six (6) batches throughout the year. Applications should be submitted to the Secretariat on or before the following deadlines: • January 31 • March 31 • May 31 • July 31 • September 30 • November 30.
16	Procedures for Fund Disbursement	No information
17	Size of the Funding source (Annual or Total)	Overall target: $250 million
18	Funding Limit for Individual Projects	No information
19	Monitoring & Evaluation Procedures	No information
20	Sources for Further Information	http://www.adb.org/Clean-Energy/cefpf.asp http://www.climatefinanceoptions.org/cfo/node/54
21	Additional Comments	

2. List of financing sources studied

A.1 Multilateral financial institutions (MFI)

1. ADB Clean Energy Financing Partnership Facility (CEFPF)
2. ADB Energy Efficiency Initiative (EEI)
3. ADB Energy for all Initiative
4. AfDB Congo Basin Ecosystems Conservation Support Programme (PACEBCo)

5. Caribbean Catastrophe Risk Insurance Facility
6. Central American Bank for Economic Integration (CABEI)
7. Clean Energy for Development Investment Framework
8. Climate and Development Knowledge Network
9. Climate Finance Innovation Facility (CFIF)
10. East African Development Bank (EADB)
11. EBRD (European Bank for Reconstruction and Development) Climate Change Finance
12. EIB (European Investment Bank)
13. EIB Climate Change Technical Assistance Facility
14. End-User Finance for Access to Clean Energy Technologies in South and South-East Asia (FACET)
15. GEF (Global Environment Facility) Climate Change Trust Fund
16. GEF Small Grants Programme
17. Global Climate Change Alliance (GCCA)
18. IDB - Sustainable Energy and Climate Change Initiative (SECCI)
19. IFC Partial Credit Guarantees
20. IFC Risk Sharing Facility
21. IFC Securitisations
22. International Tropical Timber Organisation (ITTO)
23. Latin American Carbon, Clean and Alternative Energies Programme (PLAC+e)
24. Partnership for Market Readiness (PMR)
25. Planet Banking programme
26. Private Financing Advisory Network (PFAN)
27. Sustainable Transport Initiative
28. UNDP Green Commodities Facility
29. UNEP Green Economy Initiative (GEI)
30. UNEP Renewable Energy Enterprise Development (REED)
31. World Bank - Asia Sustainable and Alternative Energy Program (ASTAE)
32. World Bank - Energy Sector Management Assistance Program (ESMAP)
33. World Bank Green Bonds

34. World Bank Group Catastrophic Risk Management
35. World Bank - International Development Association (IDA)
36. World Bank/IREDA - Indian Renewable Energy Development Agency loan programme
37. World Bank - Multilateral Investment Guarantee Agency.

A.2 Special climate funds

38. ADB Clean Energy Private Equity Investment Funds
39. ADB Climate Change Fund (CCF)
40. AfDB Congo Basin Forest Fund
41. AfDB Sustainable Energy Fund for Africa (SEFA)
42. BNDES Amazon Fund
43. Bulgaria Energy Efficiency Fund (BEEF)
44. Caribbean Development Bank (CDB) - Special Development Fund
45. Clean Technology Fund (CTF)
46. ClimDev-Africa Special Fund (CDSF)
47. E+Co Carec Fund
48. Forest Investment Program (FIP)
49. GEF - Least Developed Countries Fund (LDCF)
50. Global Facility for Disaster Reduction and Recovery (GFDRR)
51. Global Energy Efficiency and Renewable Energy Fund (GEEREF)
52. Green Climate Fund (GCF)
53. IDB - Infrastructure Fund (InfraFund)
54. IDB Group - Multilateral Investment Fund (MIF)
55. IDB Regional Fund of Agricultural Technology (FONTAGRO)
56. IMF - Green Fund
57. Indonesia Climate Change Trust Fund
58. Mediterranean Investment Facility (MIF)
59. Nordic Development Fund
60. Renewable Energy and Energy Efficiency Partnership (REEEP)

61. The Program on Scaling-Up Renewable Energy in Low Income Countries (SREP)
62. Special Climate Change Fund (SCCF)
63. Seed Capital Assistance Facility (SCAF)
64. UNDP/Spain MDG Achievement Fund

A.3 Carbon funds

65. ADB Asia Pacific Carbon Fund (APCF) and Future Carbon Fund (FCF)
66. ADB Carbon Market Initiative (CMI)
67. AfDB African Carbon Support Program (ACSP)
68. African Carbon Asset Development Facility (ACAD)
69. Carbon Finance for Agriculture, Silviculture, Conservation, and Action against Deforestation
70. EIB-KfW Carbon Programme II
71. EIB Post-2012 Carbon Credit Fund
72. Forest Carbon Partnership Facility (FCPF)
73. Multilateral Carbon Credit Fund (MCCF)
74. UNDP/MDG Carbon Facility
75. World Bank Carbon Funds and Facilities
76. World Bank Carbon Partnership Facility (CPF)

B. Bilateral financing sources

71. AFD – French Development Agency
78. AusAID - Community Based Climate change Action Grants
79. Austrian Development Cooperation (ADC) Energy and Environment Partnership Programme
80. DANIDA (Danish International Development Agency)
81. Guyana REDD + Investment Fund (GRIF)
82. International Climate Fund (Formerly ETF-IW)
83. International Climate Initiative (Germany)
84. International Forest Carbon Initiative (IFCI)

85. Japan Bank for International Development (JBIC)
86. JICA - Japan's Fast Start Finance
87. JAPAN - The Hatoyama Initiative (japan)
88. KfW - Kreditanstalt fur Wiederaufbau
89. KfW CHILE - CORFO Credit Line Program
90. KfW - Fund Solutions for Climate Finance
91. OPIC - Overseas Private Investment Corporation
92. USAID – Global Climate Change Initiative

C. Private financing sources

93. Africa Enterprise Challenge Fund: Renewable Energy & Adaptation to Climate Technologies
94. ATP Pension Fund
95. Capital Market Climate Initiative (CMCI)
96. FE Clean Energy Group Inc.
97. Institutional Investors Group on Climate Change (IIGCC)
98. Investor Network on Climate Risk (Managed by Ceres)
99. Investor Group on Climate Change Australia/New Zealand (IGCC)
100. Long-term Investors Club
101. MMA Renewable Ventures (MMARV)
102. NEFCO Carbon Finance Fund
103. P8 Group
104. X prize – Energy and Environment Prize Group

Appendix II
Guidance for Preparing Good Proposals for Financing Climate Change Mitigation Activities

1. Introduction

As indicated in Section 5 of this report proposals for climate change mitigation activities are generally:

1. **From** a developing country government agency, such as the ministry of industry, trade, energy or environment
2. **To** one or more of the donor, public or concessional climate financing sources discussed in this report, (but not to private commercial financing sources, although mobilising commercial financing can be a strong part of the proposal design)
3. **For** undertaking climate change mitigation programmes or projects
4. **Whose objectives are** to develop, implement and finance one or more climate change mitigation activities in specific target markets.

This appendix provides guidance on how to prepare good proposals for financing climate change mitigation activities. Two major types of activities are discussed here:

1. Programmes – climate change mitigation programmes are designed to systematically develop and implement a series of smaller projects of a similar nature using a common financing scheme. Examples include the establishment of a dedicated credit line for financing energy efficiency projects in small and medium enterprises (SMEs) and creating financing programmes for installing solar water heaters in households.
2. Projects – large climate change mitigation activities represented by single projects such as a wind farm, a multi-megawatt solar PV or concentrating solar power generation facility, and a biomass-to-energy plant.

2. Preparing good financing proposals for programmes

2.1 Overview

The best examples of climate change mitigation programmes are those that address the implementation of a large number of energy efficiency (EE) and/or small-scale or end-use renewable energy (RE) projects. Such programmes are designed to organise and systematically deliver EE/RE projects, services and financing to implement multiple projects in specific target markets. These programmes require financing

from multilateral or bilateral financial sources and will generally attempt to mobilise financing from national development financial institutions (DFIs) and commercial financial institutions (CFIs). Further, CFIs may partner with EE/RE businesses, energy utilities, associations of energy users, and governments acting on behalf of energy users to market their financial products and generate substantial flows of well-structured projects for financing. EE/RE finance programmes typical focus on scaled-up deployment of existing, proven commercial and sometimes near commercial technologies.

2.2 General guidance on preparing the programme proposal

In general a good proposal for financing a programme of EE/RE projects will need to include the following types of information:

1. Define the basic programme activities
2. Describe the individual projects that will comprise the programme
3. Define how the programme activities and/or individual projects are consistent with the strategic objectives of the financing source
4. Describe the rationale for why these projects are being undertaken
5. Define and quantify the specific programme objectives
6. Estimate the total programme costs, and identify the amount to be financed from the proposed source, and the amount and sources of other financing available
7. Define the baseline conditions in the absence of the programme, including key issues, barriers and challenges
8. Describe the major tasks or components
9. Identify how the programme will address the key issues, barriers and challenges and move beyond the baseline conditions to produce beneficial results for climate change mitigation
10. Provide a statement of expected results and benefits, including quantification of the climate change mitigation benefits
11. Define the risks, the potential impacts of these risks on the programme results and describe the proposed risk management plan
12. Describe the implementation and management plan
13. Define the measurement, reporting and verification (MRV) methodology.

2.3 Detailed checklist of items to be included

Countries interested in obtaining financing for climate change mitigation programmes or projects need to understand the specific requirements of the financing sources that they may be seeking assistance from. In the case of most MFIs and BFIs, the details of climate change mitigation programmes are negotiated between the financing source and the recipient country. In the case of the special funds for climate change mitigation and carbon funds, each fund has certain specific requirements for the programme proposals

and most will evaluate proposals using a competitive process. It is therefore very important to prepare the proposal to be responsive to the specific requirements.

The following checklist provides the most common requirements of the financing sources discussed in this guidebook.

1. **Programme design** – the programme design should provide a description of the programme and its key features, including:
    a. Target geographic area
    b. Target market(s)
    c. Market size
    d. Eligibility criteria for participants in the programme
    e. Minimum/maximum size of individual projects or activities
    f. Typical installations
    g. Technologies, products or equipment being installed.

2. **Programme objectives** – the objectives may include some or all of the following:
    a. Improved energy efficiency
    b. Increased use of renewable energy
    c. Emissions reductions
    d. Other goals related to climate change mitigation
    e. Interim goals to facilitate measurement of progress
    f. Development of policies and regulations conducive to programme implementation
    g. Creation of new institutional arrangements for facilitating programme implementation
    h. Capacity building (of energy users, market actors, financial institutions, energy service providers, equipment vendors, etc.)
    i. Market development
    j. Development and demonstration of new or innovative business models and/or financial products
    k. Demonstrations of new technology(ies)
    l. Justifying how these programme objectives meet the objectives and criteria of the financing source.

3. **Implementation plan** – the implementation plan should define the roles and responsibilities of the various parties engaged in programme implementation, and should provide:

a. Identification of all parties involved in programme implementation (government agencies, energy users, market intermediaries, energy service providers, equipment suppliers, designers, installers, financial institutions, etc.)

b. Project development steps (for the individual projects in the programme)

c. Description of the programme management unit or office (PMU or PMO)

d. Identification of other resources required

e. Definition of the roles and responsibilities of all parties engaged in implementation

f. Preparation of an Operations Manual describing the specific steps to be undertaken by each responsible organisation

g. Programme marketing and outreach strategy and plan

h. Information and communication activities to be undertaken

i. Financing mechanisms to be used, including identification of financing partners (if any), eligibility criteria, appraisal procedures, due diligence requirements, financing terms and conditions, etc.

4. **Identification of partners and stakeholders** – identification of the partners and stakeholders who will participate in the programme:

   a. Partners may include CFIs, EE/RE technology providers and end-user associations

   b. Stakeholders include all parties who have an interest in the successful implementation of the programme, such as energy users, utilities, EE/RE companies, government agencies and NGOs

   c. Advisory committees include representatives of stakeholders who will provide technical advice and support to the programme management unit or office

   d. Public groups or consumer representatives.

5. **Responsibilities of the programme management office** – description of the roles and responsibilities of the PMO (or PMU), including:

   a. Development of operational procedures

   b. Procurement of needed equipment and services

   c. Selection and management of consultants

   d. Developing and managing individual project transactions

   e. Collaboration with partners

   f. Management, disbursement and reporting of funds

   g. Preparation and management of programme data collection and reporting system

   h. Measurement and verification of programme results

   i. Communication and reporting to partners, stakeholders, advisors and donors.

6. **Technical Assistance and Capacity Building** – most programmes will have a component related to technical assistance and capacity building of various partners, stakeholders, implementers, etc. The proposal should describe:

   a. Definition of technical assistance and capacity building needs in areas such as: project identification, technical and economic analysis, financial structuring, business planning, project preparation, measurement and verification

   b. Description of technical assistance and capacity building plan

   c. Identification of resources needed to provide the technical assistance and capacity building.

7. **Detailed budget and statement of use of funds** – the proposal should include a detailed statement of all investments and expenditures and a detailed budget showing the acquisition and disbursement of funds, including:

   a. Funds to be received from financing sources

   b. Co-financing from partners, stakeholders, project implementers, and so on

   c. Financing for individual projects from promoters equity and bank debt, if appropriate

   d. Programme management costs

   e. Marketing, communication and outreach costs

   f. Technical assistance and capacity building costs

   g. Monitoring and evaluation costs

   h. Measurement and verification costs

   i. Other programme costs.

8. **Typical project description** – the proposal should include a description of one or two illustrative projects that are likely to be implemented in the programme, including:

   a. Short project description

   b. Definition of project proponent and implementer

   c. Definition of the technologies, products and/or equipment to be installed

   d. Project implementation plan

   e. Capital investment needed

   f. Energy savings or energy production

   g. Related cash flows

   h. Project financing plan, including equity and debt

   i. Terms of the debt financing

j. Project economic and financial summary

k. Anticipated GHG reductions.

9. **Expected programme results** – the proposal should describe the expected results of the programme, both in terms of the direct effects of the various projects to be implemented and the indirect or leveraged effects from the market impacts of the programme:

   a. Total investment value of all projects implemented directly under the programme

   b. Energy savings from EE or energy production from RE resulting directly from projects implemented under the programme

   c. Estimated GHG emission reductions resulting from energy savings or energy production

   d. Estimated programme cost per unit of emission reduction

   e. Additional investment in projects leveraged by the programme due to market transformation, technical assistance and capacity building

   f. Energy savings or energy production from the leveraged projects

   g. Emission reduction from the leveraged projects

   h. Estimated programme cost per unit of emission reduction for the sum of direct and leveraged projects.

10. **Monitoring and evaluation plan** – the proposal needs to define in detail the proposed monitoring and evaluation (M&E) plan for the programme. The plan will include a good definition of the baseline conditions prior to the programme implementation and a baseline projection in the absence of the programme. The baseline definition should be based on an assessment of the market or markets targeted by the programme. The M&E plan should define:

    a. Measurement of progress against interim goals or targets

    b. Methods to make course corrections (if needed)

    c. Approaches to strengthen programme performance and management by providing feedback from implementation

    d. Creation of a base for reporting and technical and financial accountability

    e. Methods to estimate indirect or leveraged programme effects, including any planned surveys or interviews

    f. Evaluation plan

    g. Provisions for formal third-party programme evaluation.

11. **Programme metrics** – the proposal should identify the key programme metrics and define how they will be measured and tracked. Typical metrics may include the following:

    a. For EE/RE Projects and End-users:

       i. Number of EE/RE projects implemented and financed with direct programme support

ii. Total value of EE/RE investments supported

iii. Total number of end-users engaged at each stage of the sub-project development cycle: marketing, audit, project development, and project implementation

iv. Energy saved and GHG emissions avoided due to EE/RE projects directly supported

v. Similar date for EE/RE projects implemented without direct programme support but attributable to the marketing done and public awareness created by the programme

vi. Energy saved per US$ invested

vii. Emissions avoided per US$ invested.

b. For the EE/RE companies:

i. Sales volume of EE/RE projects and services by participating EE/RE suppliers

ii. Number of participating EE/RE supplier companies and their improved business performance

iii. Range of EE/RE equipment and services offered

iv. Training of EE/RE suppliers in new marketing and equipment finance methods and adoption of these methods.

c. For Financial Institution Partners and credit enhancement programme, if applicable:

i. Total value of loans or financing transactions supported

ii. Number of EE/RE project loan transactions

iii. Extended loan tenors, e.g., to 5+ years

iv. Payment performance of guaranteed loans

v. Actual losses incurred and guarantee claims payments made

vi. Increase in the 'guarantee ratio' (guarantee reserves to total loans guaranteed)

vii. Reduction in level of credit enhancement needed over time

viii. Number of financial institutions participating

ix. Total value of loans provided by banks without credit enhancement.

12. **Sustainability and replication** – many programmes are designed to demonstrate implementation and financing mechanisms for climate change mitigation projects that can be continued after the end of the programme without further intervention from the financing source. Therefore, the proposal should define the potential for sustainability and replicability of the programme in the target markets. The proposal should include:

a. Definition of activities to be undertaken to develop the market capacity for programme sustainability

b. Plan for outreach and communication of results to encourage replicability in other markets

c. Budget for sustainability and replication activities.

13. **Risks and risk management** – since all programmes are subject to certain risks, the proposal needs to identify the major risks and develop a risk mitigation and management plan. The types of risk that may be encounters include:

a. Country macro-economic conditions, interest rates, inflation, foreign exchange rates or availability of funds

b. Risks related to policy or regulatory changes

c. Technology risk

d. Risks related to market uptake

e. Risks relate to future energy prices and government subsidies or fiscal policies

f. Credit risks of energy users

g. Loan or financing performance risks

h. Implementation risks, including staffing.

i. The proposal should identify the severity of these risks and their potential impacts on the programme, and define the proposed actions to control or mitigate the risks.

3. Preparing good financing proposals for projects

As indicated above, climate change mitigation activities for which financing is sought by developing countries may include large projects such as a wind farm, a multi-megawatt solar PV or concentrating solar power (CSP) generation facility, and a biomass-to-energy plant. The requirements for a good proposal for such projects may have some different characteristics compared to the programme proposals discussed above. The general requirements are somewhat similar but more detailed information may be required on certain project characteristics and risks.

3.1 General guidance on preparing the project proposal

In general a good proposal for financing a large climate change mitigation project will need to include the following types of information:

1. Define the project
2. Identify the technology being implemented in the project
3. Define how the project is consistent with the strategic objectives of the financing source
4. Describe the rationale for why the project is being undertaken
5. Define and quantify the specific project objectives
6. Estimate the total project costs, and identify the amount to be financed from the proposed source, and the amount and sources of other financing available
7. Define the baseline conditions in the absence of the project, including key issues, barriers and challenges to implementation

8. Describe the major project tasks or components
9. Identify how the project will address the key issues, barriers and challenges and move beyond the baseline conditions to produce beneficial results for climate change mitigation
10. Provide a statement of expected results and benefits, including quantification of the climate change mitigation benefits
11. Define the major project risks, the potential impacts of these risks on the project implementation, and describe the proposed risk management plan
12. Describe the project implementation and management plan
13. Define the measurement, reporting and verification (MRV) methodology.

3.2 Detailed checklist of items to be included

1. **Project description –** this will include a basic definition of the project:
   a. What the main purpose of the project?
   b. What need is it attempting to satisfy?
   c. Is this project new in the country or has something like it been implemented?
   d. What is the promoter's experience with such projects?

2. **Technology –** describe the basic technology, including:
   a. Definition of the technology
   b. Description of how it works
   c. Experience with the technology – international and local
   d. Status of the technology in the target market
   e. Technology provider (equipment and other resources)
   f. Operation and maintenance requirements
   g. Comparison with other competing technologies.

3. **Description of client group or customers –** who are the customers?
   a. Types of customer(s) and client(s) targeted
   b. Approximate number of customers (current and future)
   c. Customer characteristics
   d. Current product or service being used
   e. Why customer(s) will use the new product or service
   f. How customers will be reached

g. If the project involves revenue from one large customer (such as a utility or municipality), then the financial 'health' of that customer needs to be defined.

4. **Competition –** who are the major competitors?

   a. Other companies or programmes targeting the same customers

   b. Similarities between those competitors and this project

   c. Differences between those competitors and this project

   d. Why customers will choose the project's products or services?

   e. What commitments have been obtained from the customers?

5. **Market setting –** describe the market for the project:

   a. General location and conditions in the country or region

   b. Specific market(s) for the project

   c. Description of market setting, including size, population, per capita GDP, income distribution, exchange rate, inflation rate, and interest rates for deposits and bank loans.

6. **Regulatory setting –** Describe the regulatory setting and approvals/permits required:

   a. Rules and regulations that govern operation of the market

   b. Permits and approvals needed to implement project

   c. Permits needed to obtain a concession

   d. Permits needed to use natural resources

   e. Permits needed to use roads or cross public lands

   f. Environmental permits and processes

   g. Construction permits

   h. Operating permits

   i. Applicable taxes and regulations.

7. **Operating setting –** Describe the operational setting and issues:

   a. Acquisition of land

   b. Resettlement needs

   c. Security and corruption

   d. Contractors

   e. Transport

f. Contract enforceability

g. Interaction with inspectors and other public officials.

8. **Promoter organisation –** define the characteristics of the promoter:

   a. Promoter objectives (income, wealth creation, gain experience, social improvement, environmental improvement, etc.)

   b. Skills and experience base (marketing and sales, operations and management, financial planning, legal and regulatory matters, negotiation, Bank and investor relations, design and engineering, procurement and purchasing, construction, monitoring and evaluation, etc.).

9. **Team skills and experience –** Define the major skills and experience of the project team:

   a. Technical

   b. Operational

   c. Financial

   d. Legal

   e. Sales and service

   f. Marketing

   g. Political

   h. Fundraising.

10. **Description of organisation –** describe the organisation responsible for the project:

    a. Name

    b. Legal address

    c. Legal status

    d. Owners and percentage of ownership

    e. Managing director

    f. Technical head

    g. Finance head

    h. Board of directors

    i. Bank reference

    j. Accountants

    k. Lawyers

    l. Brief history.

11. **Description of supporting organisations –** describe the organisations that will support the project development and implementation:

    a. Design

    b. Construction

    c. Technical analysis

    d. Financial advice

    e. Legal

    f. Carbon benefit

    g. Other.

12. **Implementation plan –** describe in detail the implementation plan:

    a. Tasks

    b. Activities

    c. Staffing

    d. Acquisition of supporting resources

    e. Schedule and major milestones

    f. Critical path items

    g. Roles and responsibilities

    h. Management and supervision.

13. **Impacts and benefits –** describe the major impacts and benefits:

    a. Impacts related to construction, operation, land reclamation, rural development, greenhouse gas emissions, reforestation, etc.

    b. Classification of project as environmental category A, B, or C

    c. Benefits related to introduction of new technology, improved construction and operating skills, income value of new jobs, indirect income benefits, improved public areas, better access to utilities, etc.

    d. Climate change mitigation benefits

    e. Local environmental benefits

    f. Special benefits to financing sources and to the national government such as introduction of new technology, replication potential, skills development, etc.

14. **Financial projections –** develop a base case and a financial projection:

    a. Define the base case

b. Describe results of feasibility assessment

c. Document financial assumptions

d. Develop financing plan

e. Calculate and document revenues, expenses, cash flows and financial ratios such as DSCR, NPV and IRR

f. Define major parameters subject to uncertainty

g. Conduct sensitivity analysis

h. Prepare financial package.

15. **Risks and risk management –** Since all large projects are subject to certain risks, the proposal needs to identify the major risks and develop a risk mitigation and management plan. The types of risks that may be encountered include:

    a. Completion involves the risk that something started might not be completed after a lender has made funds available.

    b. Technology risk involves something not performing as planned or becoming obsolete far more rapidly than expected.

    c. Supply risk involves raw materials not being available. This can include resources which the project is going to use (e.g. a mine or a plantation forest) or buy (e.g. fuel or supplies).

    d. Economic risk exists even after a project is completed, the technology is working and the inputs are available. The result might be inefficient or the estimated market ('demand') evaporates.

    e. Financial risk occurs either when variable interest rates are used, refinancing of the project is assumed sometime during its life, or additional financing is required in the future.

    f. Currency risk is closely related to financial risk and could be lumped into that category, but the very nature of technology transfer projects warrants it being treated separately. Currency risk involves the difference between the value of the currency that impacts income or expenses and the value of the currency in which the loan repayments must be made.

    g. Political risk involves the risk that the rules and regulations governing the project might change. A good example might be the risk that a government may arbitrarily raise the taxes on a project to render it not economic.

    h. Environmental risk involves unknown environmental conditions that might disrupt a plan after it is begun.

    i. Social risk is a category that takes into account social disturbances or disruptions that can impair the project implementation.

    j. Force majeure risk is the risk that something catastrophic (such as a storm, earthquake or other natural disaster) may negatively influence a project.

The proposal should identify the severity of these risks and their potential impacts on the project, and define the proposed actions to control or mitigate the risks.

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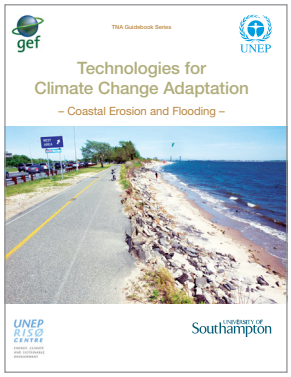

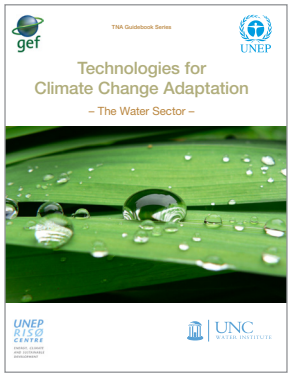

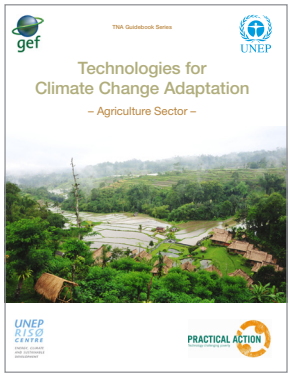

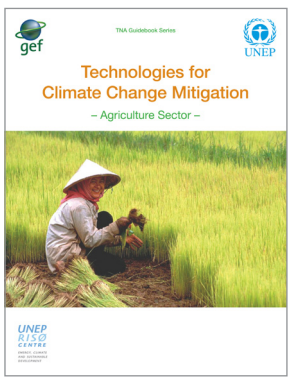

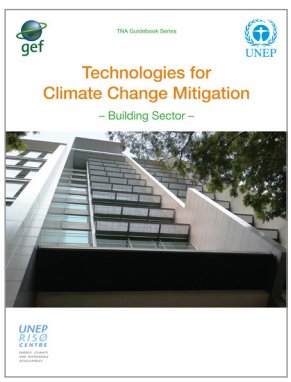

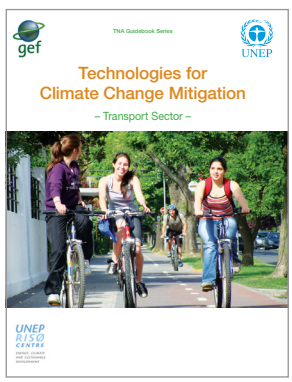

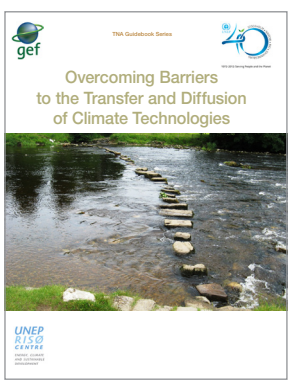

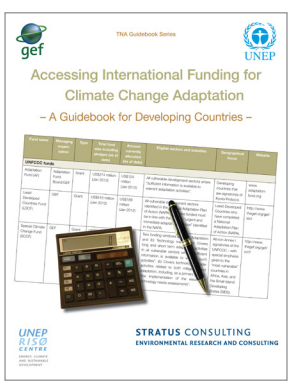

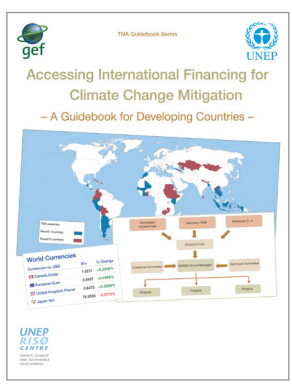

Country	Financing institution	Development cooperation agency
Germany	KfW	BMZ
France	Agence Francaise de Developpement (AfD)	Agence Francaise de Developpement (AfD)
Japan	Japan Bank for International Cooperation	Japan International Cooperation Agency
Netherlands	Netherlands Development Finance Company	Ministry of Development Cooperation
Norway	Norwegian Agency for Development Cooperation	Ministry of Foreign Affairs - Intl. Development Program
Sweden	Swedfund International AB	Swedish International Development Agency (SIDA)
USA	Overseas Private Investment Corporation (OPIC)	U.S. Agency for International Development (USAID)

This guidebook has been created to help developing countries identify and access international financial resources for their climate change mitigation projects and programs. Covering multilateral and bilateral financing institutions and private financing sources, it gives a clear overview about the international funding sources available for mitigation actions in developing countries. It also provides hands-on guidance on how to prepare high quality project and program proposals that will be useful to a broad range of stakeholders from government institutions, non-government organisations, and the private sector.

This guidebook is authored by Dilip R. Limaye, a leading international expert on energy efficiency, renewable energy, and climate finance, and Xianli Zhu from the UNEP Risø Centre. It is based on extensive collection, analysis and synthesis of information from various funding sources and the latest publications and databases on the topic.

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